SOFTWARE THAT'S OUT OF THIS WORLD: Think you're writing code for tough environments? How about Mars? PAGE 4

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iPhone: The First Year

Apple's little phone has made a big splash. Now what?

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VOL. 42, NO. 23 $5/COPY

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BREAKING NEWS AT COMPUTERWORLD.COM

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8 Whole Foods' CEO **resumes blogging** after the SEC rules on **anonymous posts** he made about a former rival. | A NASA employee **gets suspended** for writing **political blog posts** and sending **partisan e-mails** while at work.

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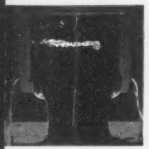

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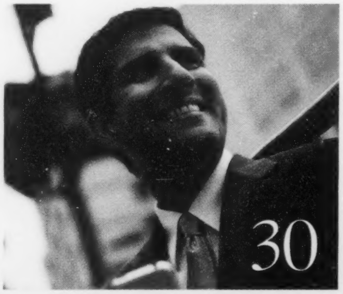
30 A Trickle Into the Enterprise. Despite price and support concerns, Apple is slowly winning enterprise converts for its iPhone. For example, Vivek Kundra (right), CTO for the District of Columbia, is considering distributing the devices to as many as 1,000 employees, including police officers.



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36 Opinion: Radio gave us an eyewitness report of the Hindenburg disaster, and TV delivered The Beatles into American homes. Mark Hall wonders when the iPhone will have its own moment in history.

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IMAGE GALLERY: Check out some of the iPhone look-alikes vying for a slice of the market.

VIDEO: Need a laugh? We've gathered the funniest iPhone YouTube videos.

READER POLL: What's the coolest feature of the iPhone? And what's the feature you'd like to see added? Take our poll.

ADVICE: Columnist Michael DeAgonia answers the most-asked questions about the iPhone.

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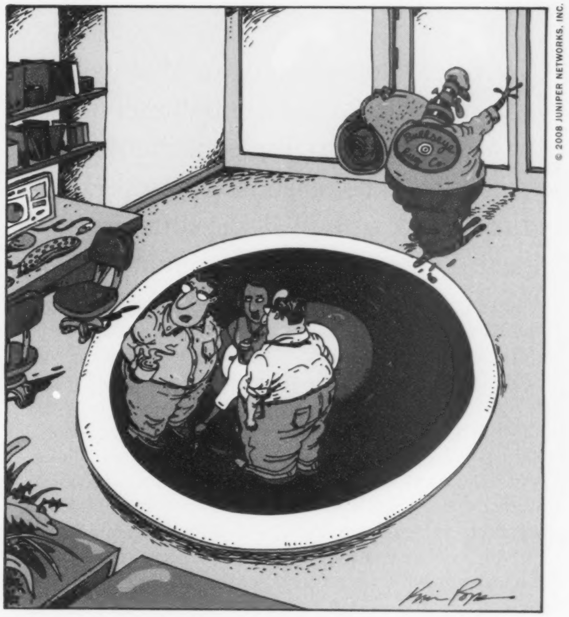
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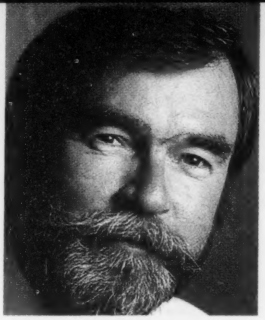
■ **EDITOR'S NOTE**

Mark Hall



Contingencies

SUPPOSE YOU were developing software that would run about 50 to 60 operational tasks simultaneously, including the management of multiple mechanical and digital devices. That'd be reasonably complex. Now consider that any time a task stumbled, the software would have to correct itself. That would mean thinking ahead for every possible contingency that could affect all running tasks and designing in self-healing capabilities. That's much more complex.

And by the way, your application will be running on Mars, so on-site service is going to be a bit of a problem.

That's the situation the app dev team for the Phoenix Mars Lander project faced when creating the application set for the spacecraft's mission. And they succeeded in every way.

In case you missed it, over the Memorial Day weekend, NASA's Jet Propulsion Lab engineers and scientists celebrated the soft touchdown of Phoenix on the Red Planet after its 422 million-mile journey. Such landings used to be the norm, but after the Viking 2 Mars landing in 1976, NASA settled craft on our planetary neighbor using airbags, which let a lander roll to a stop. Airbags are less complex and cheaper than soft landings, but they're far less precise in putting your payload where you want it.

Precision was critical for this mission, because Phoenix is looking for the building blocks of life on Mars. Digging randomly in the Martian soil is not good science. Scientists wanted to analyze samples with high concentrations of hydrogen, which presumably could be found locked in water ice beneath the northern arctic plain's surface. Hence the need for the three-point landing.

One other burden that Phoenix's software team had to bear was legacy technology. Peter Gluck, software systems engineer on the Phoenix project, told me that the spacecraft uses a "last of its kind" microprocessor to execute the code — a radiation-hardened PowerPC chip first used in the Mars Pathfinder launch 11 years ago. Imagine your boss stepping into your cubicle today and asking you to write a state-of-the-art application as complex as Gluck's — just shy of a million lines of code, Gluck estimates — and then demanding that the software run on a Pentium Pro microprocessor, the most common chip on the market in 1997. You'd probably quit.

■ On-site service is a bit of a problem when your application is running on Mars.

Thank goodness that wasn't the response of Gluck and his team. They worked countless hours to ensure that the software aboard Phoenix would be as flawless as possible. It certainly was integral to the vehicle's pinpoint landing and the successful deployment of the solar panels and the craft's seven-foot retractable arm. It will also be critical to the subsequent data collection and analysis by onboard instruments.

But the real challenge for Gluck and his fellow Phoenix coders was to conceive of all the possible contingencies and how to recover from them. He says there were "thousands we had to plan for." That's hard enough to do on our planet, where you can actually check out the environment where your app will run firsthand. Sure, they had data from other missions to work with, but that's not the same as being there.

The Phoenix software team's ability to plan for things they couldn't witness with their senses strikes me as audaciously creative. It goes beyond implementing the design requirements of rocket scientists — which they obviously did to perfection — to imagining scenarios that could stress the code past expectations and still keep it running. To achieve this, the Phoenix's software not only runs the spacecraft and its instrumentation; it is doing double duty by constantly monitoring its own health. The code's not just rock solid; it rocks.

My hat goes off to the entire Phoenix Mars Lander team for their thrilling accomplishment. But I offer an extra tip of my chapeau to the software team that wrote a robust and creative application that, in the long run, will benefit the rest of us earthlings. ■

Mark Hall *is* Computerworld*'s editor at large. Contact him at mark_hall@computerworld.com.*

DON TENNANT will return next week.

Sphere of Influence

In his editorial "Fluidity of Influence" [May 19], Don Tennant wonders why RedPrairie ranks higher than BMC, Symantec and Hitachi on Aberdeen Group's list of the 100 most influential technology vendors. I can offer a few reasons.

RedPrairie has over $250 million in revenue and approximately 1,200 employees in more than 20 global offices. While RedPrairie's revenue in no way puts the company on the Fortune 500 list, it is notably larger than the $74.5 million cited in the article.

In addition, the company is more than just a supply chain management vendor. While RedPrairie does offer software and services in warehouse management and transportation management, it is also a leader in retail operations, offering workforce management, site operations and execution management software and services. Its software is used in nearly 40,000 sites (stores, distribution centers, manufacturing sites), and 5 million workers use it to process over 150 million transactions each shift.

■ **James Hoefflin,** *executive vice president, products and marketing, RedPrairie, Waukesha, Wis.*

The View From the Salesman's Side

The May 5 report "What Buyers Want" was interesting, but it fell woefully short of the realities.

Doubtlessly in sales, as anywhere else, there are a lot of people who don't have very high standards. However, anyone who approaches his job with integrity will end up being appreciated for it.

The examples of overselling in the article are pathetic and regrettable. But in reality, there is a corollary problem that I've seen frequently: What if you are offering something that is truly new? How do you get attention?

When you're offering something radical that people may have not yet realized the need for, you have to explain things in detail. But because of stereotyping, people sometimes cannot seem to hear even a totally legitimate presentation. Still, persistence and perseverance will oftentimes earn you gratitude over time, if your product or service proves worthwhile.

■ **Rogier F. van Vlissingen,** *technology evangelist, Bit by Bit Computer Consultants, New York, rogier@bitxbit.com*

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Penetration-Testing Follies

A luxury-car dealership exposing customer bank data? A hole so big you could drive right into the FBI's headquarters? "Pen" testers dish on some of the biggest gaps they've found in so-called secure systems.

In Search of a Super-Easy Superphone

We all want a phone that does it all and is brain-dead-easy to use, Mike Elgan posits. But is it possible to build such a device? And if so, who's likely to do it?

IT Research: Is It Time to Analyze the Analysts?

In a slow economy, market research seems to be more of a luxury than a necessity. But before you ax the analyst, consider optimizing to get the most out of the data you pay for.

8 Incredibly Useful Tools For Road Warriors

Being mobile these days means more equipment – and more problems. These devices and services will make things a bit easier.

10 Essential (And Free!) Windows Security Downloads

Security and privacy protection don't have to cost a lot – or indeed anything at all. These 10 freebies for Windows systems will keep you safe from prying eyes and bad guys.

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News Digest

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THE WEEK AHEAD

MONDAY: The 2008 Computerworld Honors Program awards ceremony takes place in Washington, recognizing organizations for their beneficial uses of technology.

TUESDAY: Microsoft's Tech-Ed conference for developers opens in Orlando with a speech by Bill Gates. Meanwhile, Microsoft CEO Steve Ballmer speaks at a government IT dinner being held in Washington by the AeA trade group.

WEDNESDAY: IDC begins its IT Forum & Expo in Boston.

ISTOCK

OPERATING SYSTEMS

Microsoft to Remain Mum About Windows 7 – Mostly

FIRST, MICROSOFT Corp. said last week that it would have little to say about the next version of Windows for the time being. Then, hours later, the vendor said that the next release, currently called Windows 7, will include touch-screen technology from its Surface tabletop computer.

Microsoft officials also demonstrated the touch-screen capabilities at *The Wall Street Journal*'s All Things Digital conference, showing off prototype applications running on top of an initial build of Windows 7.

"It's all Windows 7 underneath," wrote Chris Flores, a director on Microsoft's Windows Client communications team, in a post on the Vista blog last Tuesday.

About 15 hours earlier, Flores had posted another blog entry, saying that Microsoft plans to take a more closed-mouth approach on disclosing the technical details of Windows 7 than it has in the past, particularly during Vista's development.

"With Windows 7, we're trying to more carefully plan how we share information with our customers and partners," he wrote. "This means sharing the right level of information at the right time depending on the needs of the audience."

Flores defended the new approach, saying that Microsoft officials expect it to help the company "be more predictable in the delivery of our products." He also noted that Microsoft "can significantly impact our partners and our customers if we broadly share information that later changes."

Gartner Inc. analyst Michael Silver said that to prevent users from ditching their Vista plans, it's important for Microsoft to keep its talk of Windows 7 to a minimum. Too much early chatter about the future release — which is expected to be ready in late 2009 or early 2010 — might convince corporate customers to sit tight with Windows XP and skip Vista entirely, he said.

But both Silver and Michael Cherry, an analyst at Directions on Microsoft, agreed that the increased reticence might be better for users and business partners as well as for Microsoft itself.

"I'd rather know less information than have bad information out there," Cherry said. "People invested time and money in anticipation of features being [in Vista] that weren't there."

"They talked more publicly about Vista," Silver noted. "But in the end, that didn't make them a lot of friends."

— Gregg Keizer and Eric Lai

HARDWARE

Intel Delay Could Aid AMD Rally

A PROBLEM with an integrated graphics chip set last week forced Intel Corp. to postpone the launch of its new Centrino 2 mobile platform just as rival Advanced Micro Devices Inc. is set to unveil a competing chip this week.

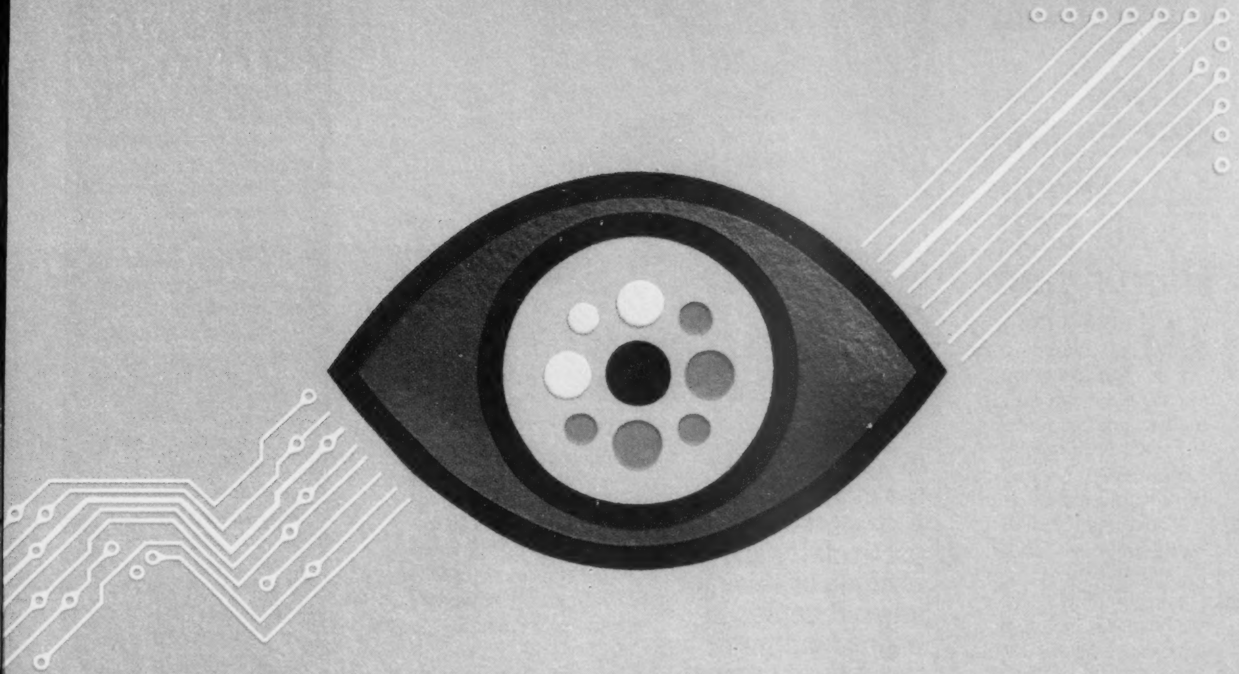
The product delay is the first for Intel in about two years, analysts said.

> **"It's a minor blip for Intel, providing that they deliver as promised.**
>
> **DAN OLDS**, ANALYST, GABRIEL CONSULTING GROUP INC.

The platform, which includes Core 2 Duo and Core 2 Extreme mobile processors, was slated to ship in full this month. It will now ship in stages in July and August, Intel said.

"Intel's glitches will be affecting one of the two biggest buying times of the year," said Charles King, an analyst at Pund-IT Inc., citing the back-to-school shopping season. "AMD will be able to go to [resellers] and say, 'We have the next-generation products ready to roll, and Intel doesn't.' "

– SHARON GAUDIN



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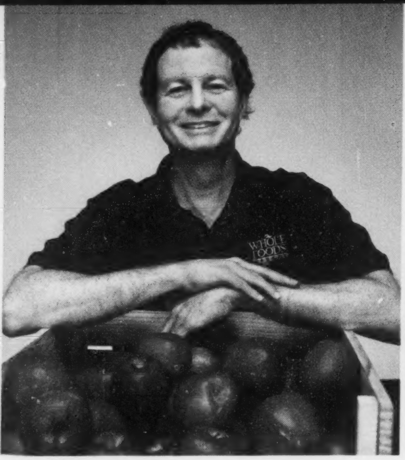
WEB 2.0

SEC Ruling Lets Whole Foods CEO Blog Again



WHOLE FOODS MARKET INC.

WHOLE FOODS Market Inc. Chairman and CEO John Mackey, who came under fire last summer for using anonymous online posts to bash competitors, is back in the blogging saddle.

Mackey had been mum online since last July, when his eight-year practice of posting comments about the business, including knocks against rival Wild Oats Markets Inc., on a Yahoo financial bulletin board came to light.

The anonymous posts were disclosed in an unsuccessful lawsuit filed by the U.S. Federal Trade Commission to block the sale of Wild Oats to Austin-based Whole Foods. The sale closed last August.

A similar investigation by the U.S. Securities and Exchange Commission ended in April after the agency said it had found no reason to penalize the grocery chain or its CEO.

> **“I do not think that the virtue of transparency is particularly applicable or relevant when it comes to online communities whose custom is to participate through screen names.**
>
> **JOHN MACKEY** (ABOVE), CHAIRMAN AND CEO, WHOLE FOODS MARKET INC.

Mackey resumed posting online after that decision and denied in his blog that he had tried to manipulate the stock of Wild Oats. He contended that his last online mention of Wild Oats came months before merger talks began in January 2007.

Mackey noted that he was trying to participate in online communities as “just another unknown participant on equal terms” with other posters.

“I do not think that the virtue of transparency is particularly applicable or relevant when it comes to online communities whose custom is to participate through screen names,” Mackey said.

Adam Sarner, an analyst at Gartner Inc., said that the need for executive online transparency depends on the context of the post.

In a financial discussion, Mackey’s position as CEO should have required him to at least disclose that he worked for the company, Sarner added.

“The fact that it might even appear unethical,” he said, “should have been enough for him to give this another thought.”

— Heather Havenstein

Short Takes

Apple Inc. last week issued patches for 40 vulnerabilities in more than 25 components and applications bundled with Mac OS X, including iCalendar and the Apple implementations of Flash Player and Apache. Sixteen of the flaws were deemed critical.

The Albany, N.Y., County Supreme Court found **Dell Inc.** guilty of fraud, false advertising, deceptive business practices and conducting abusive debt collection practices. The court said that the PC maker did not provide promised technical support to customers.

IBM has introduced three rack servers based on quad-core processors from **Advanced Micro Devices Inc.** for users who need systems with a lot of memory. The low-end model offers 48GB of memory and the high-end model has 128GB.

VMware Inc. has agreed to acquire **B-hive Networks Inc.**, a maker of application performance management software, for an undisclosed sum.

GOVERNMENT

NASA Worker Suspended For Political E-mails, Posts

A NASA EMPLOYEE recently learned the hard way that federal workers can get into legal hot water if they blog or send e-mails about political issues while on the job. And others on the government’s payroll may soon learn similar lessons.

The U.S. Office of Special Counsel (OSC) said May 21 that the unidentified NASA employee had been suspended without pay for 180 days for violating the Hatch Act, which requires government workers to keep their jobs and political activities separate from one another.

The suspension took effect March 30 after the OSC found that the employee – a midlevel worker at the Johnson Space Center in Houston – had written “numerous” political blog posts at work. He also had solicited political contributions via blog posts and used his NASA e-mail account to send out “partisan” e-mails, according to the OSC.

A spokesman for the OSC said it is investigating “a lot” of similar cases at other agencies.

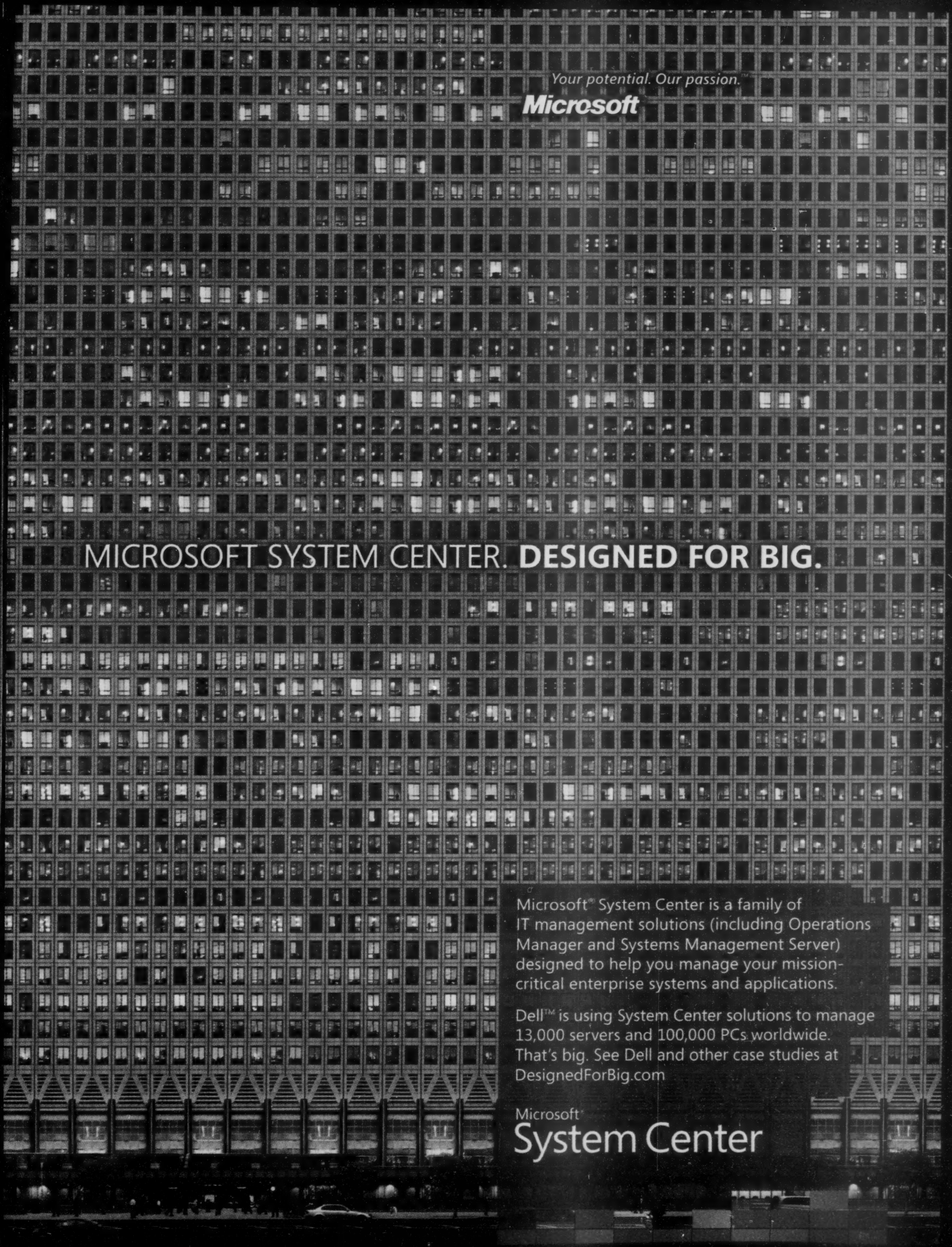
In the past, Hatch Act violations often involved federal workers wearing campaign buttons in the office, special counsel Scott Bloch said in a statement. But now, he added, technology “multiplies the opportunities for employees to abuse their positions.”

– PATRICK THIBODEAU

No Can Do

According to an IT orientation document for new employees, NASA prohibits the use of its systems for:

- External fundraising, lobbying or barred partisan political activities.
- Activities that might be interpreted as attempts to influence members of Congress on legislation or appropriations.



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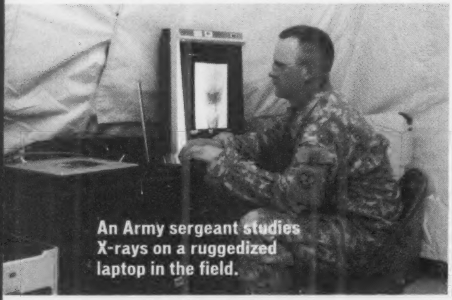
■ NEWS DIGEST

HARDWARE

U.S. Military Broadens Use Of Medical Records System

THE U.S. MILITARY has expanded beyond the Army with its rollout of a system that lets doctors and medics access and update the electronic medical records of soldiers in battle zones.



An Army sergeant studies X-rays on a ruggedized laptop in the field.

The Medical Communications for Combat Casualty Care system — or MC4, for short— is now being used at all Army and Air Force battlefield medical facilities. As of April, it also had been installed at some Navy and Marines sites in southwest Asia, military officials said.

They added that since the MC4 program began in 2003, more than 24,000 pieces of ruggedized hardware have been deployed in Iraq and 13 other countries. The equipment includes Motorola and Hewlett-Packard handhelds, Panasonic laptops and HP ProLiant servers. About 26,000 military personnel have been trained to use the system, and more than 5 million medical records have been created thus far.

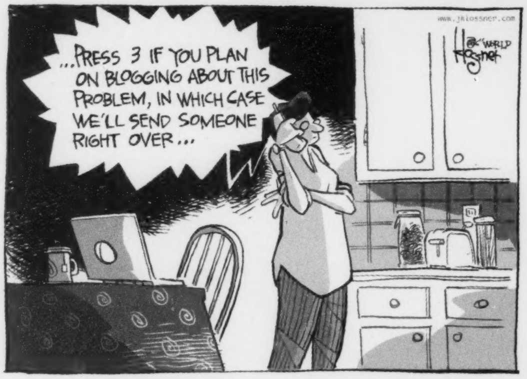
One of the system's users is Air Force Col. John Mansfield, a urologist who is stationed at Balad Air Force Base about 40 miles north of Baghdad. The new technology "has absolutely improved health care" at the base, Mansfield said last week, noting that he and other medical personnel can now quickly access "a global medical record" for patients.

For example, Mansfield said that one of his colleagues last week was able to track years of blood tests done on a soldier he was treating.

Mansfield acknowledged that MC4 has had some technology "hang-ups," including occasional network slowdowns. Long term, the biggest improvement he'd like to see is the ability to use a single password to access different applications. But he said that overall, he has found the system to be solid.

— *Matt Hamblen*

BETWEEN THE LINES *By John Klossner*



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BENCHMARKS LAST WEEK

After outsourcing its e-commerce operations to **Amazon.com Inc.** for the past seven years, bookseller **Borders Inc.** launched its own online sales Web site.

A **federal judge** ordered private investigators who were involved in the 2006 media-leak probe scandal at **Hewlett-Packard Co.** to stop obtaining and selling personal telephone records.

ONE YEAR AGO: The U.K. government released Version 3 of the IT Infrastructure Library, or ITIL. It was the first update of the IT service management guidelines in seven years.

Global Dispatches

Brazilian Outsourcer To Expand in U.S.

BRASILIA – Politec SA last week announced plans to expand its outsourcing operations in the U.S. by adding more than 700 employees in its Atlanta, Miami and New York offices.

The outsourcing firm, which is based here, currently employs about 7,000 people – 50 in the U.S. – and provides services mostly to companies in Latin America.

The company generates about $300 million (U.S.) in annual revenue.

Dalton Luz, Politec's vice president of corporate affairs, said the U.S. hiring is part of a worldwide expansion funded in part by an $80 million (U.S.) investment in the firm in April by Mitsubishi Corp.

Patrick Thibodeau,
Computerworld

EC to Fund African Tech Projects

LUSAKA, Zambia – The European Commission has agreed to provide some €78 million ($121 million U.S.) to help fund IT infrastructure development in countries that are part of the Common Market for Eastern and Southern Africa.

Sindiso Ngwenya, assistant secretary general for programs at Comesa, said the financial support will help speed work on cross-border initiatives like Comtel, a telecommunications project that promises to link the regional economic agency's 21 countries with the rest of the world.

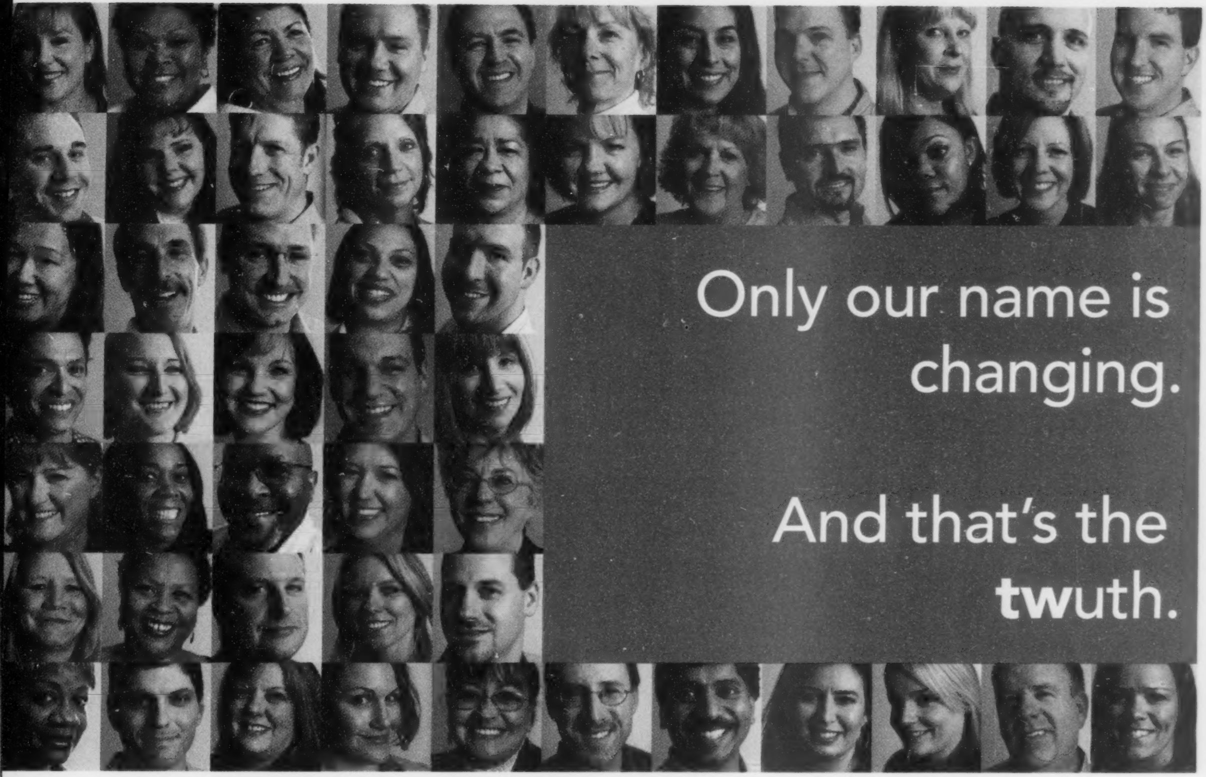
The EC funding will also support efforts to boost access to electricity in the member countries of the Lusaka-based organization, which include Zambia, Zimbabwe, Botswana, Kenya and Malawi.

Michael Malakata,
IDG News Service

BRIEFLY NOTED

Wolfgang Ziebart has resigned as president and CEO of Infineon Technologies AG over differences of opinion on "future strategic orientation," the Neubiberg, Germany-based chip maker confirmed last week. Executive Vice President Peter Bauer succeeds Ziebart as head of the company.

John Ribeiro,
IDG News Service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Web 2.0 Tools Help Customers Get Better Service

Technology is forcing firms to learn to respond to customers quickly. **By Heather Havenstein**

COMCAST CORP. scored a public relations coup in April when an executive responded within 20 minutes to complaints about a cable outage posted by a prominent blogger on a microblogging site.

The blogger, Michael Arrington, reported that a top official from Comcast had responded to his post and made sure that a technician was dispatched to fix what turned out to be a 36-hour outage.

Comcast is one of several large companies that have recently started using Web 2.0 tools to monitor blogs and social networks to better communicate with users and discover their concerns.

The tools promise to cut support, marketing and development costs and keep customers loyal. And, analysts and users said, it won't be long before companies that don't implement Web 2.0 programs risk losing significant business to competitors that do.

Arrington said he first notified Comcast of the outage through a more traditional means: by calling the help desk. But technicians there didn't know when they would be able to correct the problem.

ADVICE FROM THE EXPERTS

On building online communities:

- Leave control of Web 2.0 sites in the hands of the community.
- Start with a core group of customers and provide the tools they need to communicate.
- Don't bombard communities with marketing or advertising – or you'll face a backlash.
- Ask key influencers among customers to launch conversations among users.
- Accept that in most cases, customers know more about products than the companies that sell them.
- Let customers answer one another's questions without interruption from employees.
- Use customer input to define specific features of new products by giving them access to product teams during planning.
- Allow for real-time customer feedback during product development.

SOURCE: FORRESTER RESEARCH INC.

Granted, Arrington's stature in the blogosphere may have accounted for the Comcast exec's speedy response to his complaint. But the quick customer service followed the launch a few months earlier of the company's Comcast Cares program, which was started to monitor Twitter feeds and respond to customer concerns posted on the company's site.

In October 2007, prior to Comcast's launch of the Web 2.0 effort, magazine columnist and radio personality Bob Garfield created a blog called "Comcast Must Die." His aim was to help Comcast customers publicly air complaints about the cable company. At about the same time, a 76-year-old woman made national news by taking a hammer to a keyboard in a Comcast office after becoming frustrated with the company's customer service response.

A cursory check of Comcast Cares on May 22 found multiple examples of employees responding — often in less than 15 minutes — to complaints that customers posted on Twitter, where users can create 140-character mini-blogs. Comcast employees typically apologized for the problems and requested the information needed to solve them.

A Comcast spokeswoman said that the company created the program to proactively address customer concerns and noted that it can now engage its customers wherever they are most comfortable.

Most early corporate Web 2.0 efforts included internal blogs, social networks and online communities that focused on improving communication among workers. The growing popularity of such tools among consumers has led to the launch of what some companies are calling Customer Service 2.0 tools, which monitor what customers say in online forums.

New York Life Insurance Co. in late April began a move to Customer Service 2.0 by providing a platform for customer feedback on articles and other content on its Web site. The company also added links to various social networking sites so users could bookmark and share information across the Web.

Ken Hittel, vice president of corporate Internet development at the insurance company, said the initial version of the site was designed to give customers a way to "talk" to the company. The feedback program is just Step 1 in a plan to make better use of New York Life's Web site to gain insight into customer needs, he explained. The next step will be to have employees actively respond to customer comments on the site.

Like many other businesses, the insurer took its first step with some trepidation, Hittel said. Some executives, he noted, worried about what customers would say about the company once the barn doors were opened.

"In fact, if there is some particularly bad thing that people want to say about us, it's better that we find out about it," Hittel said. "People are talking about us on the Internet just like they are

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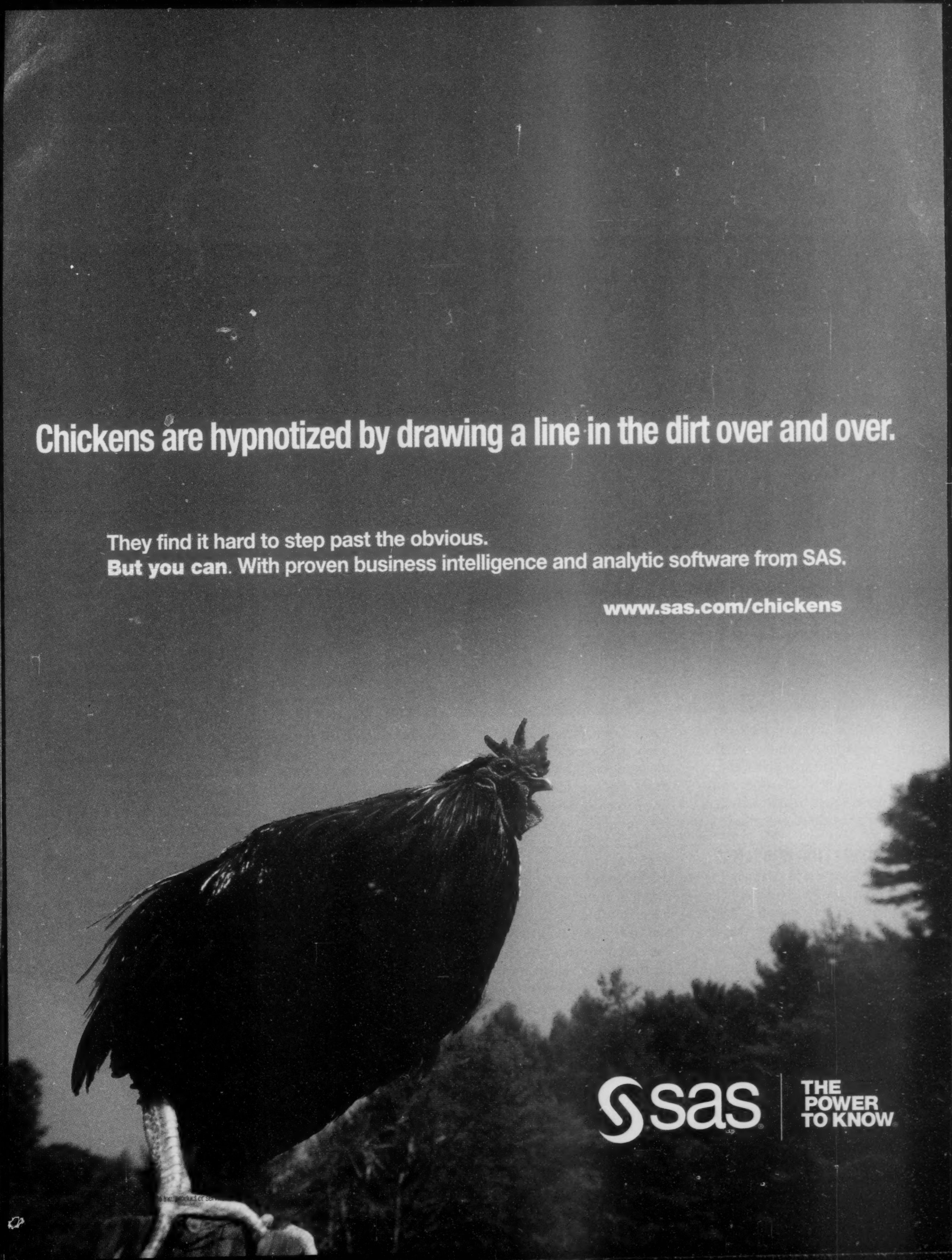

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THE POWER TO KNOW

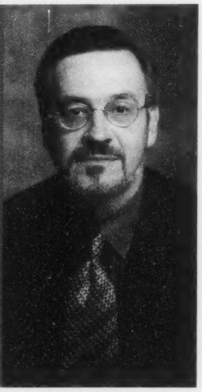
Continued from page 12

talking about everyone else. This gives people a chance to talk about us directly to us, as opposed to behind our back."

Therein lies the key reason why IDC analyst Rachel Happe is critical of firms that are reluctant to embrace the new form of customer service out of a fear of negative feedback. She called such concerns a "red herring."

Customers have always been in control of the brands they use, Happe noted, but now they can arm themselves with virtual megaphones and shout their criticism throughout the blogosphere. It's only common sense to at least listen to what these customers say.

> **"If there is some particularly bad thing that people want to say about us, it's better that we find out about it. People are talking about us on the Internet just like they are talking about everyone else. This gives people a chance to talk about us directly to us, as opposed to behind our back.**
>
> **KEN HITTEL**, VICE PRESIDENT OF CORPORATE INTERNET DEVELOPMENT, NEW YORK LIFE INSURANCE CO.



ADMITTING MISTAKES

In many cases, just acknowledging a problem can help ease criticism on the Web, Happe noted. For example, Dell Inc.'s acknowledgement that some critics of its support programs were justified has led to a gradual shift in the company's image. Since its admission, the tone of some initially critical bloggers has become neutral or even positive, Happe said.

Meanwhile, SAP AG's online social community for developers and business process managers now includes more than 1 million users, she said. Many small and midsize companies are using SAP-sponsored online communities to gain access to a network of peers to discuss questions and concerns about SAP products. The SAP program is improving the lot of users because it allows them to get quick answers from fellow customers. It's also cutting SAP's support costs, since fewer questions have to go to help desk personnel.

"Customers are actually starting to feel like they can ask questions, which is good, because they are engaging and they are getting more satisfaction — at a lower cost to the company," Happe said.

Another benefit is that company executives can use customer input when making strategic business decisions. For example, The Artful Home, a Web site that sells art and other home decorating items, significantly changed the site's content based on user suggestions. The site is run by The Guild Inc., a Madison, Wis.-based art dealer that links artists with potential buyers.

By monitoring the number of customers participating in specific discussion topics and analyzing the content they posted, the company found that customers are mostly interested in how to incorporate the products they are buying into their design and decorating projects. "That was a pretty resounding answer to a very big question for us," said Toni Sikes, founder of and artistic adviser at The Guild.

The company was surprised by what users really wanted, since some executives had thought that bolstering information about individual artists and their artistic motivation would be most beneficial, Sikes said. Others had maintained that it was most important to tell customers how products were made.

The company gained an understanding of the needs of its customers by using a hosted tool from Madison, Wis.-based Networked Insights Inc. to analyze the content posted to its eight-month-old online customer community.

Rally Software Development Corp., a Boulder, Colo., provider of hosted agile software development tools, is using its online customer community to help transform its users into "product co-designers," noted Ryan Martens, founder and chief technology officer of Rally.

The customer community replaces a complex system that gleaned data from e-mail communications, CRM software and other communication channels to get a 360-degree view of Rally product users.

Now the company uses software from HiveLive Inc., also in Boulder, to run multiple customer discussions, an extranet for partners and a customer support platform.

The hosted Rally offerings automatically link requests for support to an area in the online community where company engineers preview potential new features and collect user feedback. Users can vote on features they would most like to see in new releases. The top five or 10 are added to the products, Martens said.

Rally said that about 3,000 users of its software, or about 15% of its overall customer base, are active in the community. The users can create their own topic areas and opt to restrict access to a private group or open a topic to the entire Web. The user community has become such an integral part of the company's operations that Rally has begun using it as a way to let potential customers "know who we are and how we work before [they] sign their first purchase order," Martens added.

Emerging Customer Service 2.0 programs are allowing customers of some companies to, in essence, take over ownership of corporate brands and become their miniature marketing departments, according to analysts and executives. As more companies add such features for customers, it becomes critical for competing businesses to also quickly address customer concerns and to even reach out to customers before they take their problems public.

Executives at companies that successfully navigate the new customer service landscape say they can provide more service at a lower cost, forge closer relationships with customers and bolster marketing and product development efforts. ■

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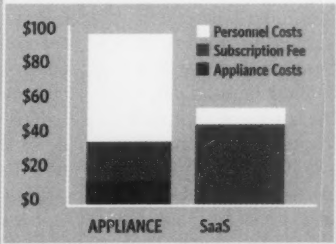

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Inside Job Highlights IT And Oversight Failures At Bank

A report on the trading scandal at Société Générale says IT controls weren't strong enough and managers should have been more vigilant. **By Jaikumar Vijayan**

AS A RELATIVELY low-level financial trader at Société Générale, Jerome Kerviel didn't have much business engaging in directional trading in securities for the Paris-based bank. But that didn't stop him from surreptitiously making the risky investments for more than three years while allegedly processing fake transactions to help cover his tracks.

Société Générale officials finally discovered Kerviel's unauthorized activities in January. By then, he had amassed so many directional trading positions — basically, bets that the prices of stocks would move in a certain way — that it cost SocGen a staggering $7.2 billion in losses to close them all out.

On May 23, the inspector general's department at the bank publicly released a report that illustrated a fundamental lesson for companies to take away from the trading debacle — namely, that IT controls are crucial for managing corporate risk but are nearly useless without proper monitoring and enforcement efforts.

In SocGen's case, the inspector general found shortcomings in both IT and management oversight. From a technology standpoint, the carefully worded 71-page report and a shorter preliminary version that was released in February both noted that Kerviel's division had implemented all of the bank's recommended IT controls. But none of the controls could generate alerts that were "sufficiently loud or persistent," according to the full report.

For instance, one technique that Kerviel allegedly used to conceal his trading activities was to process fake transactions and then quickly cancel or modify them before they could be settled and confirmed. No controls had been implemented to flag such modifications or cancellations, the report noted.

After the unauthorized trading came to light, SocGen said that it was implementing stronger biometrics-based user authentication and access-control measures, as well as automated controls designed to close the system loopholes that Kerviel allegedly used to hide his actions.

But the problems at SocGen went much deeper than a failure of technology, according to the internal report. Kerviel, who was an IT staffer at the bank before becoming a trader, made nearly 1,000 unauthorized transactions starting in 2005. Until he was finally caught, the report said, he managed to evade detection via a combination of forged communications, outright lies and his extensive knowledge of SocGen's systems.

The report pointed to five non-IT reasons why bank officials failed to detect Kerviel's activities earlier despite several warning signs.

One of them was a lack of oversight of Kerviel's work, especially during a period between January and April 2007, when he was virtually unsupervised after his immediate manager resigned. It was during those months that the bulk of his unauthorized trading took place.

Managers at the bank also appeared to tolerate Kerviel's participation in so-called intraday trading, even though such transactions were "unjustified" given his job assignment and experience level, the report said.

And Kerviel's superiors downplayed or ignored numerous red flags that were raised about his trading activities. Even two queries related to Kerviel's trading from the Eurex derivatives exchange didn't receive much attention from his manager, who simply accepted his explanations.

"Risk control is not all about technology," said Scott Crawford, an analyst at Enterprise Management Associates in Boulder, Colo. "The process aspect is just as important." He added that companies often implement all of the IT controls and internal processes needed to keep their workers in line but then fail to enforce them.

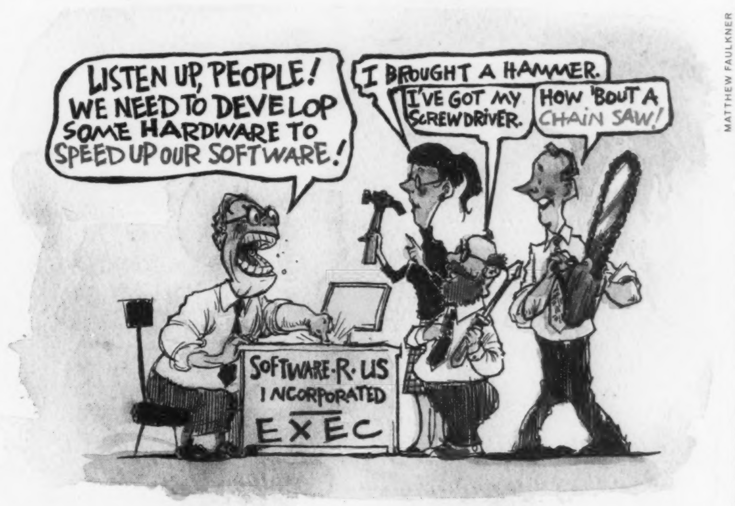
The scandal at SocGen "makes it clear that there was a huge gap" between the controls that were in place and bank business managers' enforcement of them, Crawford said.

The only really surprising thing, said Forrester Research Inc. analyst Khalid Kark, is the fact that such a disconnect existed in a company that had prided itself on its risk management capabilities.

"Being a bank, they definitely had some controls that could have pointed to some of the discrepancies" that resulted from Kerviel's trading, Kark said. "The core of the issue — and we find this across many other companies as well — is that they weren't at all monitoring the controls they had put in place." ■

On the Mark

HOT TRENDS ■ NEW PRODUCT NEWS ■ INDUSTRY BUZZ BY MARK HALL


LISTEN UP, PEOPLE! WE NEED TO DEVELOP SOME HARDWARE TO SPEED UP OUR SOFTWARE!
I BROUGHT A HAMMER.
I'VE GOT MY SCREWDRIVER.
HOW 'BOUT A CHAIN SAW!
SOFTWARE-R-US INCORPORATED
EXEC

MATTHEW FAULKNER

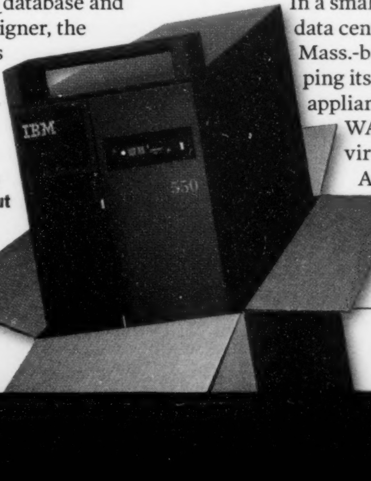
Hardware for Analytics

YOU DON'T generally think of Sybase Inc. as a hardware vendor. And it's not. But come July, the Dublin, Calif., company will add the Sybase Analytic Appliance on IBM Power Systems to its product line.

Irfan Khan, chief technology officer at Sybase, claims that the product addresses a "burgeoning problem" in business: There are orders of magnitude more data than ever, all being sliced and diced in every direction by more people with more purposes than ever before.

Khan says the need for a high-performance, general-purpose analytics tool is so broad that for many applications, a packaged hardware/software appliance can do the job as well as or better than a custom analytics infrastructure.

The appliance includes the Sybase IQ database and PowerDesigner, the company's database design and modeling tool. It also comes with MicroStrategy Inc.'s appliance management console and, of course, an AIX-based IBM dual-core server with 8GB of memory. You can bolt on more processing and memory capacity as your data continues to expand. Pricing runs around $27,000 per terabyte of storage.



Database maker Sybase now offers hardware for "out of the box" analytics.

Losing the Hardware

In a small victory in the war against data center clutter, Burlington, Mass.-based Certeon Inc. is dropping its Linux-based hardware appliance. It will now accelerate WAN apps with aCelera, a virtual machine.

Another plus of going all-software is price. Certeon's S-Series appliances started at $6,000, whereas an aCelera VM starts at $2,495.

And the performance difference is negligible, according to Gareth Taube, vice president of marketing.

There are limits to the good news, of course. Currently, Certeon's proprietary "blueprinting" techniques for speeding up apps on your WAN work only for SharePoint, SAP and Documentum environments. And aCelera is available today only for VMware. A Hyper-V version will follow Microsoft's delivery of its VM technology this summer, and one for Xen won't ship until the end of the year.

SugarCRM Opens SaaS Market

SugarCRM Inc. in Cupertino, Calif., has released a beta of its brand-new Sugar Data Center Edition (DCE) tool that can turn SugarCRM (Version 5.1 or later) into SaaS implementations of the popular open-source CRM software.

SugarCRM sweetens SaaS with open source, Roberts says.

CEO John Roberts might dispute the description "brand-new" for Version 1.0 of DCE, given that it's really an open-source release of the management console the company has been using for some time now with its own Sugar On-Demand software-as-a-service business.

But Roberts says he didn't think it was right for SugarCRM, as an open-source company, to be the only entity that could offer its app as a service. "Why make everybody come to our servers?" he asks.

Pricing will vary.

Roberts, a former software engineer, says SugarCRM's goal is to out-engineer proprietary competitors in both the SaaS and on-premises applications businesses.

"We're going to compete with great code," he says. "We're going to do to proprietary CRM vendors what Japanese automakers did to Detroit in the 1970s."

So, would that make SugarCRM the Corolla or the 240Z of our times? ■

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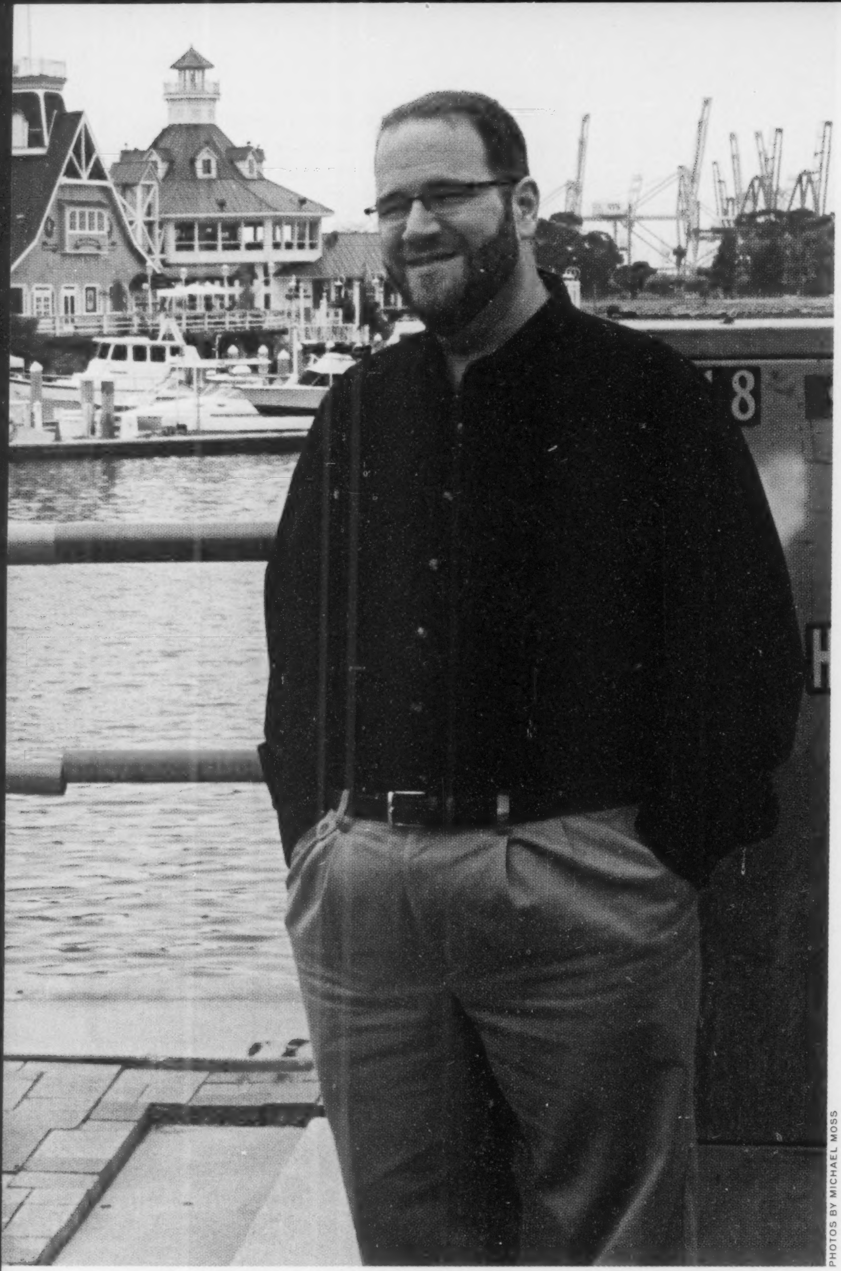


PHOTOS BY MICHAEL MOSS

THE GRILL

Clarence White

The **Salvation Army's CIO** talks about building **massive applications**, using **BI to prioritize human services** and tracking **bell-ringer demographics.**

Dossier

Name: Clarence White

Title: IT secretary and CIO

Organization: Salvation Army, USA Western Territory

Musical instrument played: Trombone

Last book read: *Ending Aging: The Rejuvenation Breakthroughs That Could Reverse Human Aging in Our Lifetime*, by Aubrey de Grey

Favorite food: Sushi

Favorite vacation destinations: Mexico and the Caribbean

Vehicle: Toyota Sienna minivan

Favorite sports team: The National Hockey League's Anaheim Ducks

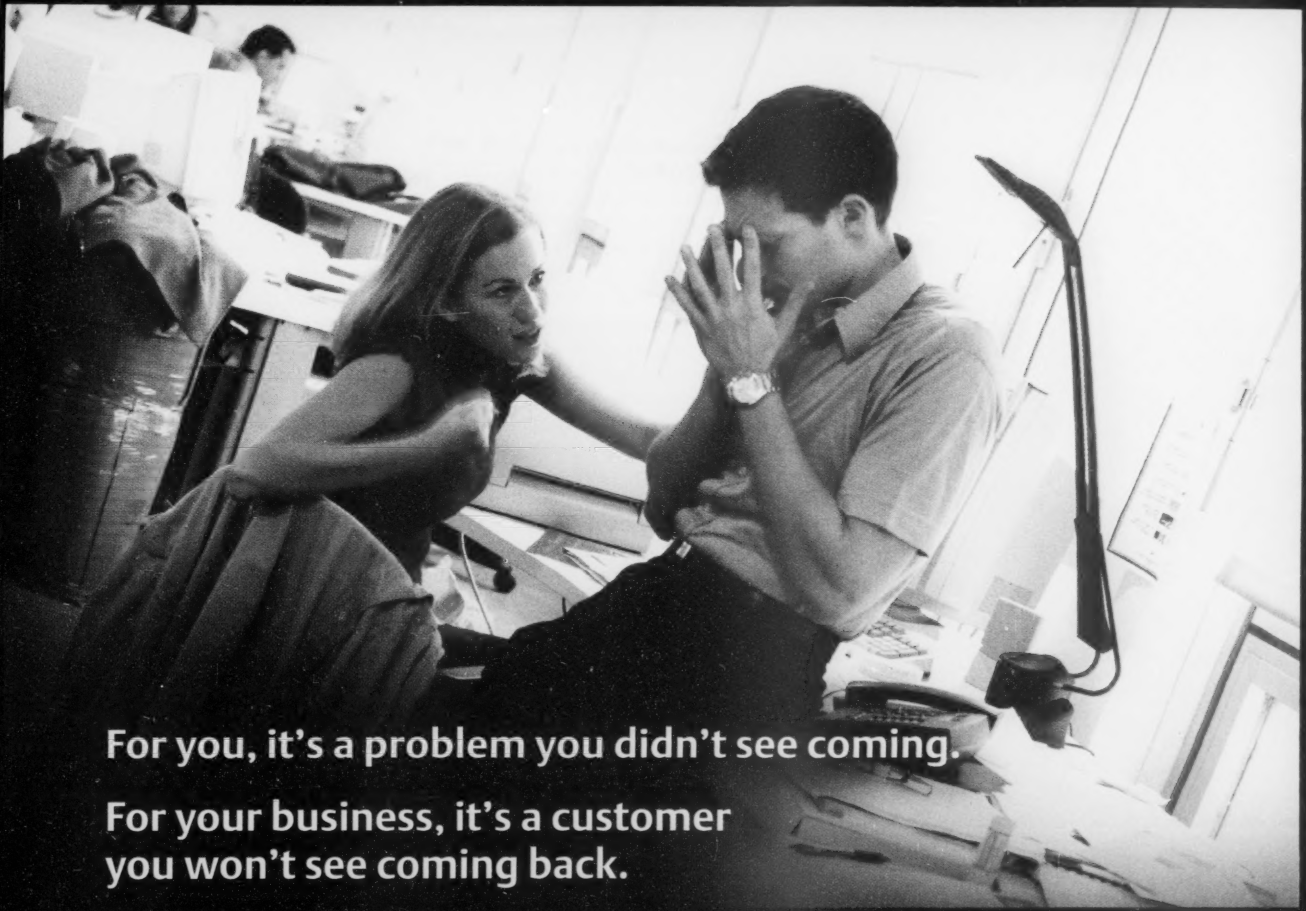
Clarence White is responsible for the Salvation Army's IT operations for 13 western states, which are linked in a cohesive network that provides social services to millions of needy people.

Are IT needs different for the Salvation Army, or are they basically the same as in for-profit businesses? One of the key differences is that we end up developing a lot of our own software rather than purchasing it. Off-the-shelf products sometimes just don't fit what we do. When we develop it ourselves, we don't have to pay license fees per seat. Obviously, we're very cost-sensitive. It would only work if we were good at developing software, and we are.

What kinds of things do you have to support in IT? The retail stores are a very small part of what we do. In the stores, we have point-of-sale terminals and data collection, and the credit cards are processed every day, but behind that we have the whole infrastructure that collects the items that we sell in those stores. That's more of a technical challenge than the point-of-sale part of it.

We have call centers and a Web site where donors tell us that they have goods that they want us to pick up. We have operators to schedule that, and we have trucks that pick up the items. We

Continued on page 20



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> **The bell ringers – we capture incredible data about those bell ringers, believe it or not.**

Continued from page 18

have systems that automate that whole process, and that's all available online as well. When those goods are collected, they go to one of 25 warehouses, where they're sorted and priced and sent to any one of our 160-some stores, where they're sold and tracked.

That whole line of business only exists to support our rehabilitation industry; that's all it's for. The proceeds go straight back into our adult rehabilitation program, which is a residential program for men and women who are suffering from substance abuse. There's literally dozens of other programs, from food banks to hospitals.

And all of these activities are supported by your IT department? Every one of these things has an IT infrastructure behind it. The bell ringers — we capture incredible data about those bell ringers, believe it or not. It looks like a pretty unsophisticated operation, but we know how productive each of our kettles is. We capture all the demographics in the database. Then we can compare how productive kettles are in [various] locations and best deploy our labor and get the maximum returns.

What are some of the applications that you've built for yourselves? We have our own social services case management system. We run a network of social services operations across 13 states. We have millions of clients and tens or even hundreds of millions of transactions with those clients. So typically, [the commercial products] that are out there just aren't scalable to that volume.

We run our social services application from our data center, and our caseworkers access it over a network, and all of our casework information is stored in a central database. That gives us lots of opportunity to better serve those people who come into contact with us.

For example, somebody comes in, and we give them a food basket, and we track it. Let's say later they need some kind of substance abuse rehabilitation. We have a record for them now, and we can see a whole case history for them. And we're better positioned to provide them a higher level of service.

And the flip side of that: Let's say you have an opportunist who wants to go from one office to another getting vouchers for food or whatever. It gives us the ability to identify people who would try to take advantage of the system and to provide those who need the most help a higher level of help.

Has IT become more important to your agency's mission in the past few years? Yes. The fundraising has become more complex, sophisticated, difficult, more competitive. There's a huge IT investment in that activity.

The numbers of people that we serve — just to track the information concerning their treatment and the cost of running our various outfits [requires] sophisticated information technology.

And when you've grown like we have, over more than 100 years, sometimes parts of the organization will continue on under their own inertia unless you have the ability to critically look at those businesses and see how effective they are. IT has been a terrific help with that, in using data mining and business intelligence to determine our effectiveness in various areas of our ministries. By pruning those areas that are weak and identifying the areas of strength and encouraging those, that's how the organization stays vital. We've got some great applications that do that.

So we developed our own formulas. The inspiration for that came from some unusual places. I read Michael Lewis' book, *Moneyball: The Art of Winning an Unfair Game*. They identified in the Oakland A's some undervalued statistics to help them find major-league ballplayers who would help them put a winning team out with low cost.

So we said, "Wow! We could apply that same logic using our statistics in our business to identify who's doing the best with the resources they have." And we did that. That's a really effective and innovative use of technology, which is to some degree game-changing, I think, for a nonprofit.

Are you looking at new technologies like streaming media and Web 2.0 features? Look at one of our Web sites. It's called Saytunes.com. We built this because we have a large ministry to youth. We created this site where young people can come and post music they create or record. It's been hugely popular. Hundreds of people come from all over the world, [and] you can see where they're from because we have band trackers to show you on the globe where they all are. And they post their songs, and people comment about them. You can download them, or you can listen to them on the site. You can vote on them.

We'll use our Web sites and IT infrastructure to continue to encourage and attract a new generation of people who support us and who want to volunteer to help us.

— Interview by **Todd R. Weiss**

ALTERNATIVE THINKING ABOUT ASSURANCE:

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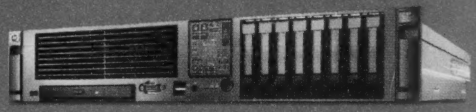

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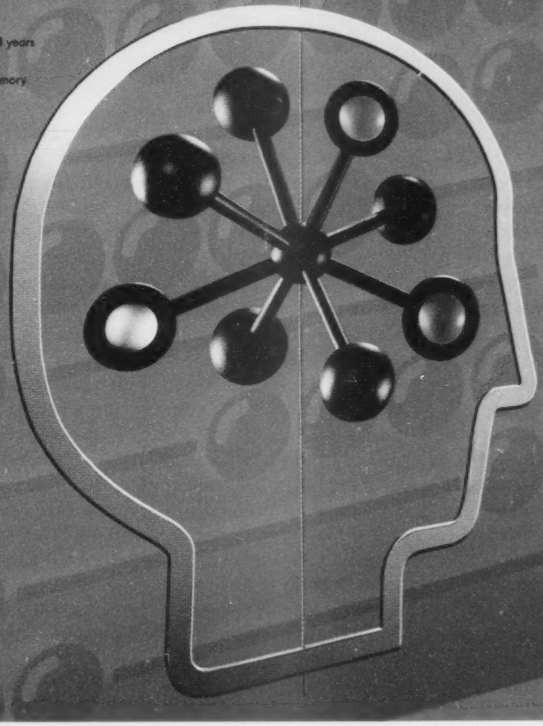

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*Based on IDC Worldwide Quarterly Server Tracker, February 2008. In calendar 4Q07, IDC reported worldwide HP ProLiant server shipments at 681,445 units, well ahead of Dell PowerEdge's 499,715 units at #2. IDC also reported ProLiant factory revenue at $2,743 million vs. $1,580 million for Dell's PowerEdge family. Prices shown are HP Direct prices; reseller and retail prices may vary. Prices shown are subject to change and do not include applicable state and local taxes or shipping to recipient's address. Offers cannot be combined with any other offer or discount and are good while supplies last. All featured offers available in U.S. only. Savings based on HP published list price of configure-to-order equivalent ($3945 - $1420 instant savings = SmartBuy price of $2,525). 1. Financing available through Hewlett-Packard Financial Services Company (HPFS) to qualified commercial customers in the U.S. and subject to credit approval and execution of standard HPFS documentation. Prices shown are based on a lease of 48 months in terms with a fair market value purchase option at the end of the term. Rates based on an original transaction size between $3,000 and $25,000. Other rates apply for other terms and transaction sizes. Financing available on transactions greater than $349 through July 31, 2008. HPFS reserves the right to change or cancel these programs at any time without notice. AMD, the AMD Arrow logo, AMD Opteron, and combinations thereof are trademarks of Advanced Micro Devices, Inc. © 2008 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice.

■ **OPINION**

Thornton A. May

Why Enterprise Strategy Matters

STRATEGIES ARE all around us in IT. We have go-to-market strategies, growth strategies, vendor management strategies, consolidation and migration strategies, infrastructure strategies, HR strategies and innovation strategies.

What we don't have all too often is a differentiated, make-the-heart-pump-faster enterprise strategy.

"Not our job," a lot of you are probably saying. "We're here to enable strategy, not formulate it." But if a company lacks a coherent, clear-cut strategy, the IT organization's ability to *really* add value is significantly reduced. In the absence of such a strategy, you, as an executive, have an obligation to assist in the creation of one.

Part of the problem is widespread confusion about what strategy is. It can mean a whole lot of things to different people. Many undergraduates, as they embark on the study of business, believe that the words *mission, goals* and *objectives* are synonymous with *strategy.* Too often, that confusion hasn't been cleared up by the end of the course of study, and we end up with business executives who are just as fuzzy on the nomenclature.

Writing in the April *Harvard Business Review,* David J. Collis and Michael G. Rukstad asked, "Can you say what your strategy is?" Their answer: Very few executives can. In fact, only a sad little minority could respond affirmatively when asked, "Can you summarize your company's strategy in 35 words or less?" and, "If so, would your colleagues put it the same way?"

Collis and Rukstad went on to explain why strategy matters. They pointed out that companies in the same industry can — and frequently do — have very similar missions (why they exist) and visions (what they want to be). A good strategy, they argue, can fundamentally differentiate a company from its competitors, and they list three key ingredients that make differentiation possible: an endpoint (a specific objective, complete with time frame), a domain (the landscape upon which the enterprise will operate) and an advantage (why and how you will achieve that endpoint vis-à-vis the competition).

■ **'Not our job,' a lot of you are probably saying. 'We're here to enable strategy, not formulate it.'**

Our own research at the IT Leadership Academy helps show why strategy matters to IT. For 30-plus years, IT executives have taken the rap for underperforming IT investments. Yet our CIO Habitat interviews revealed that for over 60% of the IT projects that were deemed to be "underperforming" or "disappointing," the root problem was not poor project management, bad technology choices or lackluster execution. No, the steaming projectile in the middle of the IT value crater was bad business strategy.

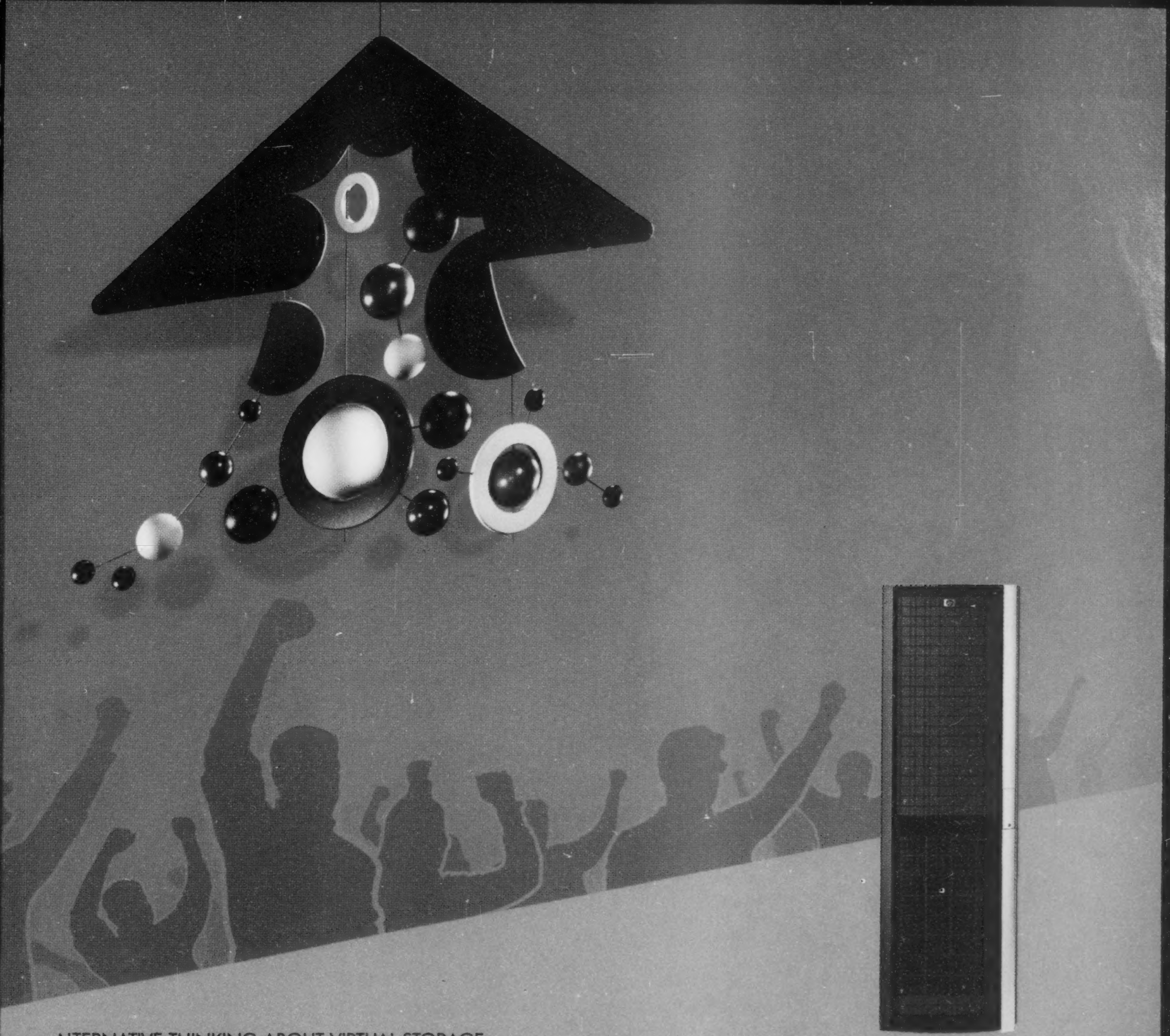
The big question, then, is how to devise a valid strategy. It needn't — in fact, it shouldn't — be plucked out of thin air.

Several organizations we talked to don't really have a formal strategy. But in many of those cases, the seed of a strategy, if not the strategy itself, already exists. It helps to see this by thinking of what economists call "revealed preference," a theory that states that people's preferences are revealed by the choices they make. This is true of organizations as well. Even when there is no formal strategy in place, it may be possible to tease out what the underlying strategy is through behavioral observation.

If you want high-value IT, you need a high-impact strategy. The important thing is to apply the brainpower to do this and to work with other executives to make the strategy as coherent, valid and ripe for success as possible. You want your company to be among that minority of organizations that have a strategy to change the rules of the game being played or to be one of that slightly larger group that has a strategy to win the game as it is currently being played.

What you can't afford to be is one of those companies that has only a vague idea that there is a game being played at all. ■

Thornton A. May *is a longtime industry observer, management consultant and commentator. You can contact him at thorntonamay@aol.com.*



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9:49 AM
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iPod
Phone

iPhone: One Year Later

PHOTOILLUSTRATIONS BY WILLIAM DUKE

Apple's splash into the cell phone market proved consumers will pay for hip devices. Now the race is on to one-up the iPhone.

By Matt Hamblen

WHAT A difference a year makes. This month, the hip iPhone celebrates its first anniversary, following its riotous launch last June 29. Its birth followed six months of prerelease hype that was ignited by Apple Inc. CEO and industry luminary Steve Jobs.

The company that brought you the Macintosh computer, and the fabulously successful iPod and iTunes, has jumped — well, dive-bombed, really — into the wireless phone business like no cell phone vendor before.

Consider that more than 1 billion cell phones were sold globally in 2007, with thousands of models introduced. But the model that had everyone's attention for much of the year sold just 5.4 million units through March 2008, according to Apple. The company predicts that it will sell 10 million devices this year, partly because of innovations in the iPhone 2.0 version due this month.

No cell phone, nor arguably *any* electronic device, has ever generated so much interest so quickly.

"Few companies have managed to penetrate such buyer mind share with a single device in a year's time," says Michael Gartenberg, a JupiterResearch LLC analyst and a *Computerworld* columnist. "What's significant is how iPhone's impact has been far greater than the numbers sold."

Among smart-phone devices (which basically combine computer and phone functions), the iPhone ranks second to Research In Motion Ltd.'s BlackBerry in terms of U.S. shipments, according to several analysts. However, Microsoft Corp. challenges this claim, saying that the Windows Mobile operating system, on 140 handsets from four manufacturers, leads the way. But the way that market leaders talk about the iPhone — and the way other vendors shamelessly imitate its touch screen, sleek design and pocket size — is testimony to its dominance.

Gartner Inc. analyst Ken Dulaney, who was initially a harsh critic of the iPhone because of security worries for IT shops, says that Apple's device and the BlackBerry are the biggest innovations in all of communications and computing over the past decade.

"The iPhone's biggest impact has been to redefine 'easy to use' in the cell phone industry," Dulaney says. In sum, the iPhone has capitalized on the biggest trends in computing: It has a small form factor, it works wirelessly for ubiquitous mobile usage, and it unifies data, voice and even video communications.

And, equally important, it's cool.

FASHION FORWARD

The iPhone builds on a trend among cell phone and gadget makers to hire product fashion designers to help in the creative process. Yes, fashion matters, even to geeks. "It seems strange to say there's a coolness factor with iPhone, but it does involve extraordinary attention to details in hardware and software," Gartenberg notes. "It doesn't feel like any other phone."

Much of the market frenzy for the iPhone comes down to ease of use, but there are other factors. Among them are its sizable touch screen, its accelerometer (which allows images to rotate as the device rotates), its hip design and quality construction (featuring only metal and glass), its snappy Safari browser and its reliance on the solid Mac OS X operating system.

"It's not one feature, but the aggregate of many features that has attracted people, and Apple has spent a lot of time marketing each one of the innovations separately," Gartenberg says.

The iPhone certainly has its critics, and they emerged on Day One. The initial iPhone-bashing focused on its use of AT&T Inc.'s relatively slow EDGE wireless network, which Apple says it chose because it was so widespread in the U.S. AT&T is promising a faster 3G network upgrade this summer.

Some early critics noted that it could take a full minute to download a Web page over EDGE — much longer than the almost-instant downloads depicted in iPhone TV ads. For the iPhone's Wi-Fi users, though, Internet browsing has generally been much faster.

CRAZY FOR CONTENT

iPhone users are more likely than their smart-phone-using counterparts to access and view other mobile content:

	Any news or information via browser	Accessed Web search	Accessed social networking site or blog	Watched on-demand video or TV programming	Accesed social networking site or blog	Listened to music on mobile phone
iPhone users	84%	58.6%	30.9%	20.9%	49.7%	74.1%
Smart-phone users	58.2%	37%	14.2%	7%	19.4%	27.9%
All mobile subscribers	13.1%	6.1%	4.6%	1.4%	4.2%	6.7%

SOURCE: M:METRICS INC. SURVEY OF 31,389 U.S. MOBILE SUBSCRIBERS, JANUARY 2008

However, Apple's five-year commitment to lock in the iPhone with AT&T's network flies in the face of the other major trend of the past year in wireless mobility: openness, in both networks and applications.

Google Inc. and the Open Handset Alliance took advantage of concerns about the iPhone being locked in to a single carrier when they introduced their Android software last November. Based on the Linux operating system, it would allow users to work anywhere on any network. Google was also an instigator of a major push to have the Federal Communications Commission's 700-MHz auction include a channel that required the auction-winning carrier to support any device.

Apple ignores such talk and staunchly says its iPhone is allied with AT&T and that's that. But some analysts believe there is wiggle room. "Perhaps some future version of iPhone could be outside AT&T," Gartenberg suggests. But Dulaney differs, saying, "Unlocking from AT&T won't happen."

In contrast, Apple's commitment to openness centers around a multitude of applications, not networks. Its software development kit, announced in March, has attracted the interest of 500,000 developers, and analysts say it could lead to literally hundreds of new applications being distributed to users via Apple's AppStore.

Based on Apple's March announcement, what's officially coming next week in iPhone 2.0 are features designed largely to impress business users, including support for device management functions and Exchange e-mail, an apparent response to concerns that the device didn't support a business-class e-mail system. But there will also be plenty of new consumer-focused applications, including entertainment from start-up i.TV.

Ironically, while the iPhone is making a play for the enterprise (see story, page 30), RIM has begun marketing its BlackBerry — a mainstay among business users — to consumers with slick TV ads and a new developers conference aimed in part at promoting consumer applications. And RIM is reportedly releasing a touch-screen BlackBerry called Thunder later this year.

Experts predict that future successful wireless devices will need to appeal to both consumers and business users at once, recognizing that there is a true "prosumer." And at least so far, most analysts believe RIM and Windows Mobile devices are more secure.

THE COPYCATS

Apple's competitors, primarily the traditional cell-phone makers, have so far offered a set of competitive features wrapped in sleek cases that imitate the iPhone. Representatives of two competitors, Hewlett-Packard Co. and Palm Inc., acknowledged at a recent conference that when the iPhone was announced, their teams launched a series of focus groups and design meetings to wrack their brains to create something better.

"There's no doubt that the innovative interface of the iPhone caught most industry stalwarts flat-footed and most are now aggressively trying to catch up to Apple," notes Jack Gold, an analyst at J.Gold Associates LLC.

For example, Sprint Nextel Corp. and Samsung Inc. announced the new iPhone-like Instinct wireless device on April 1. Due to ship this month, it is designed to improve on the iPhone touch screen with the use of haptics, a technology that lets users feel a "buzz" when an icon or keypad is touched. (Some iPhone users complain that they can't "feel" a button push.) The Instinct uses a different technology from the iPhone accelerometer, but it still allows a user to maneuver the device to navigate on a Web page. The Instinct also adds voice commands for making Web searches, and it natively supports GPS for mapping and location-related searches.

Some iPhone imitators are also trying to woo customers on price, offering devices for $349 or even less, compared with iPhone's $399 (if buyers can find one). That strategy might not pay off, however, if Apple lowers pricing on its new iPhone models. Predictions vary, but Dulaney and independent analyst Jeff Kagan claim that the current iPhone line will drop in price this summer, with newer devices on a 3G network selling at the current price.

Reports surfaced in April saying that AT&T might even subsidize that cost and offer a next-generation iPhone for an amazing $199. Still, iPhone imitators

Continued on page 28

WHAT IT COSTS

Pricing plans for individual iPhone users come in the following four tiers:

	TIER 1	TIER 2	TIER 3	TIER 4
Monthly price	$59.99	$79.99	$99.99	$119.99
Minutes	450	900	1,350	unlimited
SMS text messages	200	200	200	200
Night and weekend minutes	5,000	unlimited	unlimited	unlimited

---

DEVICE COST:

8GB: $399

16GB: $499

NOTE: iPHONE USE REQUIRES AN ACTIVATION FEE AND A MINIMUM TWO-YEAR WIRELESS SERVICE PLAN AGREEMENT WITH AT&T, THE EXCLUSIVE CARRIER FOR THE iPHONE. ALL PLANS INCLUDE UNLIMITED DATA ACCESS (E-MAIL/WEB), VISUAL VOICE MAIL, CARRYOVER MINUTES AND UNLIMITED MOBILE-TO-MOBILE SERVICE.

SOURCE: APPLE INC.'S WEB SITE

LIFTING ALL BOATS . . .

Market shares for mobile device makers worldwide saw double-digit (and triple-digit) increases in shipments from the fourth quarter of 2006 to the fourth quarter of 2007.

VENDOR	Q4 2006 shipments	Q4 2007 shipments	Growth	Current market share*
Total	20,667,200	35,522,360	71.9%	100%
Nokia	11,114,630	18,802,480	69.2%	52.8%
RIM	1,829,260	4,046.860	121.2%	11.4%
Apple	Prelaunch	2,320,840	**	6.5%
Motorola	1,463,090	2,301,260	57.3%	6.5%
Others	6,260,220	8,050,920	28.6%	22.7%

SOURCE: CANALYS.COM LTD., FEBRUARY 2008.

*PERCENTAGES DO NOT ADD UP TO 100 BECAUSE OF ROUNDING.

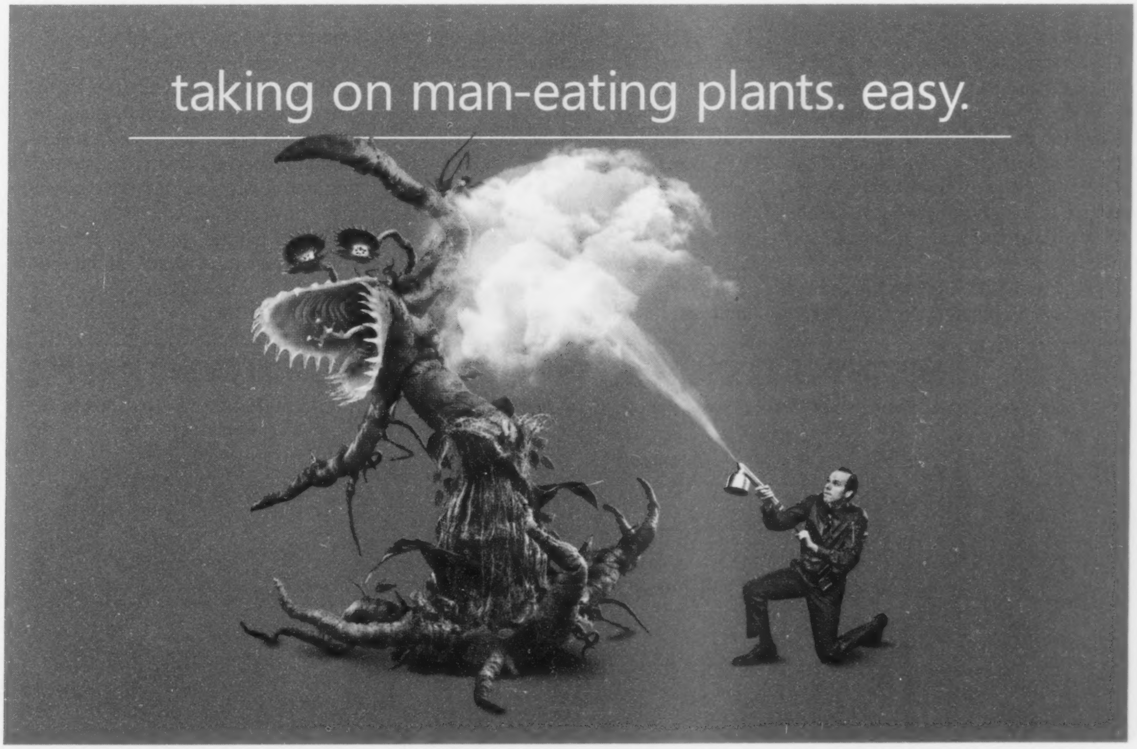
** APPLE HAS ESTIMATED SHIPMENTS OF ABOUT 4 MILLION iPHONES IN ALL OF 2007.

BIG-TIME BROWSING

Market-share figures show that the iPhone is now the No. 1 device for mobile Internet browsing in the U.S., and No. 2 globally (behind Nokia).

	U.S.	GLOBAL
Apple	0.18%	0.08%
Nokia	0.01%	0.25%

SOURCE: STATCOUNTER, DUBLIN, MARCH 2008


taking on man-eating plants. easy.

Continued from page 26

might also bargain with buyers by offering more flexible network voice and data pricing than Apple and AT&T do.

The biggest improvements that iPhone users want, based on message boards, blogs and other sources, are native GPS capability, increased storage capacity, more memory, longer battery life, support for Adobe Flash to run multimedia applications and, foremost, a faster cellular network. During an April press conference at CTIA Wireless 2008, AT&T Mobility LLC President and CEO Ralph de la Vega reiterated that 3G support for the iPhone and other devices is coming this summer.

What that probably means is that next-generation iPhone users will get HSDPA/UMTS 3G connectivity, which has already been deployed by AT&T in major metropolitan areas, with download speeds of more than 600Kbit/sec. — well above the existing EDGE speeds of 70Kbit/sec. to 135Kbit/sec. While Flash doesn't seem to be coming anytime soon, mobile device consultant Glenn Edens and other analysts say third-party developers will have a plethora of applications for the iPhone in coming months.

Gold expects a "running battle for features" and "user interface improvements" from Samsung, Motorola, RIM, LG Electronics and Nokia, among others, for the next several years. However, Edens believes that the iPhone, and its future iterations, could actually relegate many competing devices to the gadget graveyard.

"As the innovation leader, the iPhone is currently facing fierce competition from look-alike and feature-alike products. Apple cannot let up on innovation, because its competitors certainly will not," says Gloria Barczak, professor of marketing at Northeastern University's College of Business Administration.

And while many gadget fanatics love the iPhone, they can be fairly blunt about what they perceive as its faults. Some users love the iPhone's touch screen; others knock it. "It's a real pain in the you-know-what to type on and gets all greasy on a hot day," says Cat Schwartz, eBay Inc.'s gadget director, who notes that she prefers a real keyboard. (And analysts say there are probably many third-party applications in the works to provide support for a keyboard via Bluetooth wireless.)

Numerous critics assert that device competitors will have a hard time matching the iPhone's hype, if not its features, in their initial product releases. Schwartz recalls that one eBay bid for an iPhone reached $12,000 at the time of last summer's launch, prompting some in the media to escalate the hype further. "The iPhone *was* revolutionary, extraordinary, groundbreaking — not because it was the greatest invention in the world, but because of how overhyped it was," Schwartz adds.

ANOTHER YEAR IN SPOTLIGHT?

Whether the iPhone, with its 2.0 release, continues to be the sexy new thing for another year depends on many factors. Competition will play a role. For example, Nokia, the biggest cell-phone maker in the world, is marshaling resources around an iPhone-beater, code-named Tube, that could have an important influence on that company's market share in the U.S. And Nokia is just one of a number of healthy companies vying for the same customers as Apple.

In addition, endorsements or quiet rejections of iPhone 2.0 by major corporations for business users will inevitably affect sales, although most prognosticators don't believe there will be many outright rebuffs.

A wild card is how well other operating systems — including those from more established manufacturers, the coming Linux-based Android platform, or even open-source rivals Open Moko and LiMo — will do in the market. Android devices could be paired with hundreds of open market applications, even ones from garage-based developers who believe that the future of computing is in the palms of our hands.

Meanwhile, Apple, with its insistence on distributing applications only through its AppStore, faces a potential user backlash "that will make even Microsoft look like an open company," Gold claims. Some corporate IT executives have already expressed worries about being locked into "the Apple way."

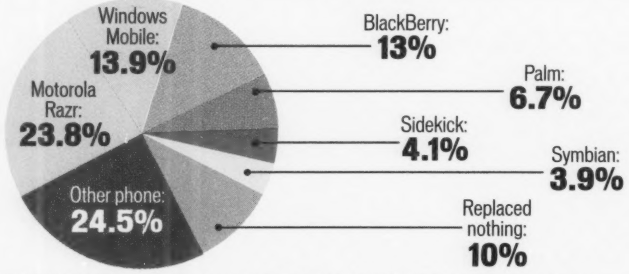
Whatever happens in the next 12 months with the iPhone, it's safe to say that the device has already made its mark. However, that place in history could be fleeting, given the astounding number of wireless handheld computing innovations on the table.

Yes, all parties agree that iPhone has altered the smart-phone landscape. A lot has happened in one year.

Now what? ■

MOTOROLA TAKES THE HIT

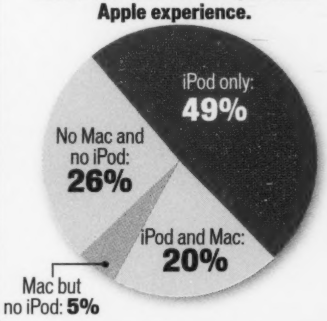
When you got your iPhone, what model of mobile phone, if any, did it replace?



SOURCE: RUBICON CONSULTING INC. ONLINE SURVEY OF 460 IPHONE OWNERS IN THE U.S., MARCH 2008
PERCENTAGES DO NOT ADD UP TO 100 BECAUSE OF ROUNDING.

SMITTEN WITH APPLE

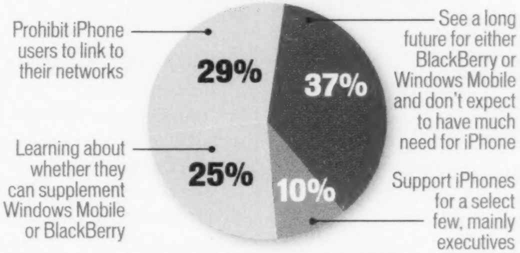
Most iPhone users had previous Apple experience.



SOURCE: RUBICON CONSULTING INC. ONLINE SURVEY OF 460 IPHONE OWNERS IN THE U.S., MARCH 2008

TINY DENT

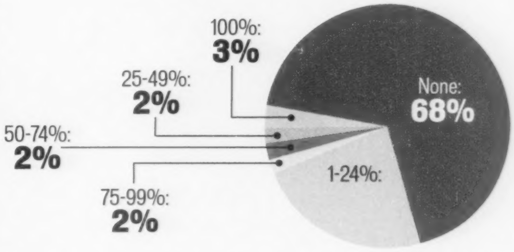
Asked about the iPhone's impact on their organizations, nearly one in three respondents said they don't allow users to link their iPhones to the company network.



SOURCE: EXCLUSIVE *COMPUTERWORLD* SURVEY OF 125 RESPONDENTS, MARCH 2008
PERCENTAGES DO NOT ADD UP TO 100 BECAUSE OF ROUNDING.

FEW CORPORATE TAKERS

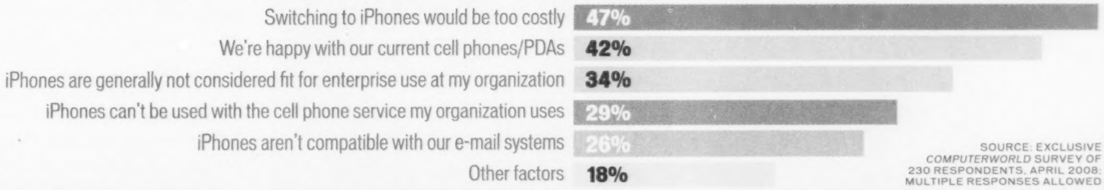
What percentage of employees at your organization have been issued iPhones for corporate use?



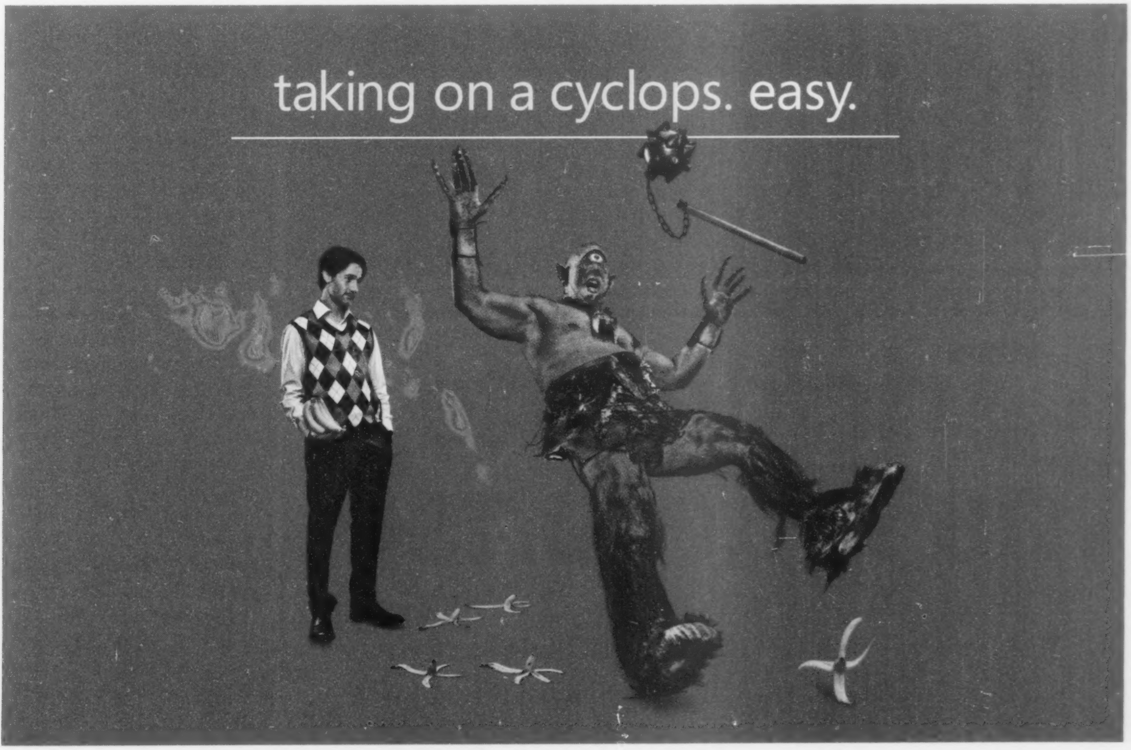
SOURCE: EXCLUSIVE *COMPUTERWORLD* SURVEY OF 230 RESPONDENTS, APRIL 2008

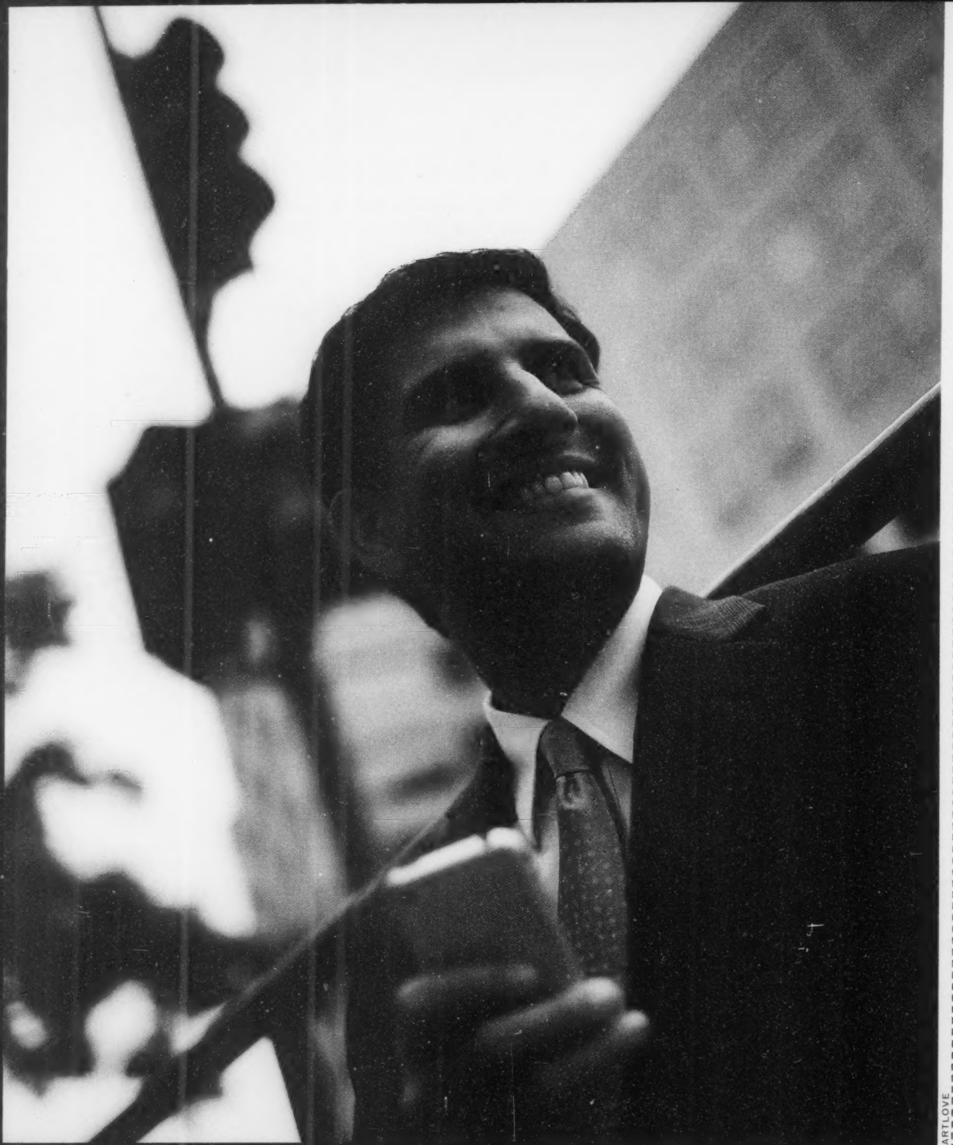
PRICE-POINT PAIN

Which of the following factors are preventing your organization from more widespread use of iPhones?



SOURCE: EXCLUSIVE *COMPUTERWORLD* SURVEY OF 230 RESPONDENTS, APRIL 2008; MULTIPLE RESPONSES ALLOWED


taking on a cyclops. easy.



"We're a big proponent of this technology," says Vivek Kundra, chief technology officer for the District of Columbia. "One of my mantras is to introduce more consumer technology into the enterprise."

CHRIS HARTLOVE

A Trickle Into The Enterprise

Consumers may be snatching up iPhones, but many IT executives are holding off, weighing murky issues like support, TCO and even durability. **By David Haskin**

IT MIGHT not be long before you see District of Columbia police officers reaching into their pockets and pulling out iPhones — in the line of duty. The city is field-testing Apple Inc.'s phone and is considering distributing the devices to as many as 1,000 employees, including police officers.

"We're a big proponent of this technology," says Vivek Kundra, the district's chief technology officer. "One of my mantras is to introduce more consumer technology into the enterprise."

One reason for Kundra's enthusiasm is that, one year after its ballyhooed introduction, Apple is increasingly pointing its iPhone toward businesses. Apple's iPhone 2.0 firmware, due late this month, will support Microsoft Exchange Server, Cisco's IPsec-based VPN client, WPA2 Wi-Fi security and other enterprise-friendly technologies.

"It's clear they're aiming at the enterprise," said Michael Gartenberg, an analyst at JupiterResearch LLC and a *Computerworld* columnist. "You don't build in Exchange support for consumers."

In addition to the new features, Apple released a software development kit (SDK) in April that enables developers to create their own applications for the iPhone, whether they are iPhone-ready versions of existing enterprise apps or entirely new ones. Virtually any application that works on other devices will soon work on the iPhone. Some commercial software vendors, including SAP AG, have also said that they intend to build iPhone versions of some of their key applications.

"This could lead to sales

of tens of millions more iPhones for Apple," says Gartner Inc. analyst Ken Dulaney. "Even if IT shops don't proactively solicit adoption, users will force them to take a look at it."

Gartner recently endorsed limited adoption of iPhone 2.0 by large organizations because of the device's new capabilities. However, Gartner's recommendation and the enthusiasm of IT executives such as Kundra won't necessarily translate into a groundswell of support for the iPhone in all companies.

"I have nothing against iPhone. It's great," says Manjit Singh, CIO at Chiquita Brands International Inc. "But we're a BlackBerry shop, and I don't think iPhone brings anything new to the table. It has a great user experience, but that's all."

While that type of sentiment is Apple's challenge, the rapidly growing consumer acceptance of the device is its advantage. Consumer adoption may well help accelerate acceptance of iPhone 2.0 in the enterprise, but not without IT managers giving close scrutiny to its capabilities, security, support, price and even durability.

APP COMPLICATION

Proponents claim that the iPhone's exceptional user experience will encourage mobile employees to make the most of new and existing mobile enterprise apps.

"For any application to be effective, people have to use it," says Vinay Iyer, vice president of marketing for SAP CRM. And since mobile applications are usually designed to increase productivity, the expectation by some, like Iyer, is that the iPhone will encourage mobile workers to embrace mobile applications, which in turn will make them more productive.

> **"Even if IT shops don't proactively solicit adoption, users will force them to take a look at it.**
>
> **KEN DULANEY,**
> ANALYST, GARTNER INC.

"Most vendors, like SAP, are probably in the experimental phase," Iyer says. "We're committed to the device itself, but the question is, what can we build as a native application, how do we support it, and how do we roll it out? Until those are figured out, we can't commit to a product release. Still, we see iPhone as a huge opportunity."

Many commercial software vendors have been mum about iPhone development using the SDK. But some, like NetSuite Inc. and Zimbra Inc., have committed to creating Web-based applications for the iPhone, and it's not a stretch to assume that they and others will jump on the iPhone SDK bandwagon.

Singh, however, isn't impressed with the argument that the iPhone will lead to higher adoption of enterprise applications among mobile users. "It's persuasive up to a point, but it isn't enough for me to start looking at the iPhone," he says.

Kundra says that ultimately, enterprises will invest in the iPhone only if their specific applications work well on the device.

"It may start in terms of

taking on dragons. easy.

people saying, 'Hey, this is the latest, greatest technology.' But that gets old very quickly," he says. "In the long term, you use the device only if there's value."

For instance, one important iPhone application for the District of Columbia will be in-the-field video training, now available via sources such as YouTube. Kundra notes that the iPhone is far more adept at playing that type of media than other smart phones are.

Avi Greengart, an analyst at Current Analysis Inc., adds that the iPhone's strong browsing capabilities will encourage enterprises to adopt the device for the same range of Web-based applications now available for laptop-toting road warriors.

"If enterprises decide there's a real need for a wide-screen Web browsing device that's used on the go by their employees, it really could be a game-changer," Greengart says. "With most other business-class phones today, even ones with HTML browsers, Web browsing is only for informational purposes."

Kundra also expects the device to be used for more meat-and-potatoes applications in the District of Columbia.

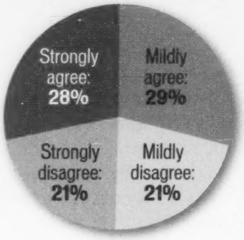
"Some applications will relate to public safety," he says. "Police officers can run criminal records on the iPhone when they're in the field. Also, a lightweight application would be good for [building] inspectors so they won't need laptops or [Panasonic] Toughbooks when they're at construction sites."

On the other hand, Singh says Chiquita's primary mobile application — e-mail — won't benefit from being accessed on the iPhone.

"I do see some applications [for the iPhone] for a segment of users," he says. "You have salespeople on the road all the time who want to do something quick and dirty like add numbers to a spreadsheet. They'd be perfect candidates for iPhone because of its usability. But we don't have enough of a penetration of mobile devices, and e-mail is still our primary application."

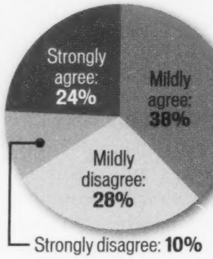
NOTEBOOK REPLACEMENT

Many iPhone users are leaving their laptops at home. Some were recently asked whether they agree with the statement, "I often carry my iPhone instead of a notebook computer."



INTERNET-READY

A group of iPhone users were asked if they agree with the statement, "The browser works well with all the Web sites I want to visit."



SOURCE: RUBICON CONSULTING INC. ONLINE SURVEY OF 460 IPHONE OWNERS IN THE U.S., MARCH 2008
NOTE: PERCENTAGES MAY NOT ADD UP TO 100 BECAUSE OF ROUNDING.

WHO BUYS THE PHONES?

But whether a company embraces the iPhone might have less to do with applications and more to do with the company's buying habits. Does the organization centralize its hardware acquisitions or allow users to buy what they want?

Leah Frankum, senior systems analyst for the physician's team at St. Luke's Episcopal Hospital in Houston, falls into the latter category. She says that about 20 physicians are already accessing information such as patient records via the browser on their iPhones. "As long as the security is there, we don't care what they use," Frankum says. "Anything that helps them with their rounds is a huge benefit."

Gartner's Dulaney says that approach is becoming more common in virtually all industries. "A lot of our clients are moving to diversity [in device acquisition]," he says. "If users want to spend their own money and it doesn't compromise security, they're OK with that."

In contrast, there likely won't be many iPhones — at least for now — in organizations that have more centralized acquisition policies.

"Where IT provides the device, a lot of IT managers are reluctant to hand out iPhones," notes Greengart. "They'd be giving out a device that Steve Jobs has said is the best iPod ever. That's not the class of device many IT managers are willing to deploy."

And despite its popularity with some enterprise users, "the iPhone will not be truly secure and compliant without including third-party add-ons," says Jack E. Gold, principal analyst at J.Gold Associates LLC. "Apple likely will not fix this problem in the near future, making it a casual rather than a robust enterprise-ready device."

Another pivotal issue for enterprise iPhone adoption is support. Apple's ability and willingness to support the iPhone in the enterprise doesn't get uniformly high grades, despite the device's forthcoming enterprise-friendly features.

"From a corporate IT perspective, iPhone is still a consumer device," says SAP's Iyer. "If a company does decide to implement iPhone, whom do they turn to for Level 1 or Level 2 support? Do they turn to the carrier? Can they call Apple and get support if the application doesn't work on the phone? Will Apple have some [enterprise] support infrastructure? A lot of these issues still need to be addressed."

JupiterResearch's Gartenberg says Apple isn't really interested in becoming a mainline provider of tools for the enterprise. "We're not seeing an assault on the enterprise from Apple [with iPhone 2.0] any more than was the case when they switched [Mac microprocessors] to Intel," he says.

A related issue is Apple's exclusive arrangement with AT&T Inc. If users in the U.S. want iPhones, they can get them only from AT&T and Apple, and they can use them only on AT&T's network. That's a problem for some companies, but not for others.

"We're not tied to any one carrier," says Paul Limon, director of business applications at Zep Superior Solutions, an industrial cleaning products supplier in Atlanta. "For our users who travel extensively, they get AT&T. But those people who don't travel much, you could find, say, Sprint."

But companies with a more centralized approach to acquiring mobile devices and services won't be as flexible, Dulaney says. "It's definitely an issue for some companies that they'd be locked into AT&T," he says.

COST OF OWNERSHIP

In the end, cost will be big factor in determining whether the iPhone will make a splash in the enterprise.

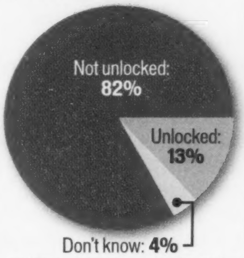
"The cost is prohibitive," says Limon. "A discounted BlackBerry device doesn't cost as much, and that's a barrier to seeing [iPhones] flourish in an enterprise."

However, Kundra is comfortable with the iPhone's total cost of ownership.

"The cost isn't trivial, particularly because it's taxpayer money," Kundra says. "But even at $400, when you take the cost of the device, which is a one-time capital expense, and compare it to, say, the service plans that go with it, that's not much."

LOCKED IN WITH AT&T

iPhone users were asked whether their phone's carrier lock was disabled, allowing them to run on a carrier other than AT&T:



SOURCE: RUBICON CONSULTING INC. ONLINE SURVEY OF 460 IPHONE OWNERS IN THE U.S., MARCH 2008
NOTE: PERCENTAGGES DON'T ADD UP TO 100 BECAUSE OF ROUNDING.

In particular, using the Wi-Fi-enabled iPhone will allow some officebound employees to use voice-over-IP via office-based wireless LANs, which will save money, Kundra says.

"We found there's a large population [of employees] that spends 80% of their time on cell phones and 20% on land lines," Kundra says. "So next year, we're freezing phone costs and starting to close land lines."

Most important, though, is an expected improvement in productivity, he says. "That $400 unleashes a lot of productivity," Kundra adds.

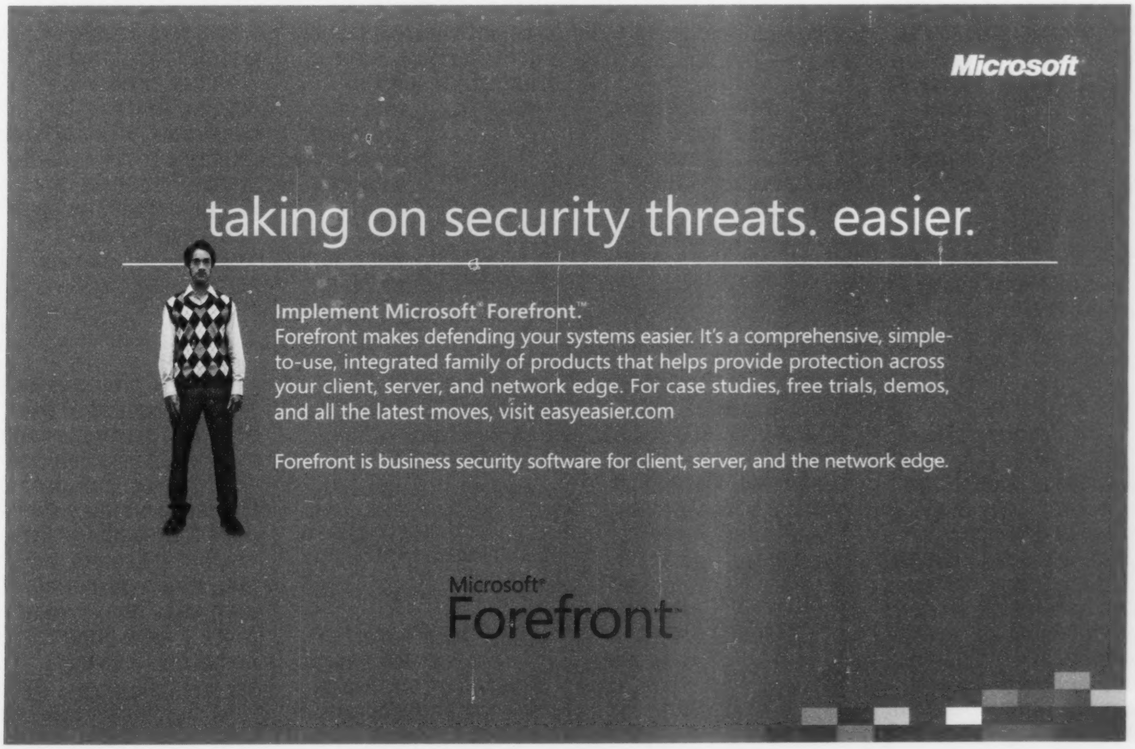
Dulaney, however, says most smart phones, including the iPhone, are more expensive for field applications than many might think.

"A salesperson for Disney — that's a perfect application for iPhone. But — and I'd say this about a Windows Mobile device, too — many field applications won't make sense for iPhone," he says. "Building inspectors drop things, for example. Those devices last about two years, and you need to look at repairs and bounce those numbers against ruggedized devices, which last four years."

Still, while enterprise iPhone adoption depends on issues such as applications, total cost of ownership, and how organizations acquire mobile devices and services, there is little doubt that more iPhones will be used by mobile workers in the future.

"There's definitely going to be a big uptick, because we'll see a couple of things happen," Gartenberg says. "With the SDK, you'll see more enterprise apps and more back-end management tools."

Though the device currently supports only slower cellular data speeds, he adds, "you factor in the availability at some point of 3G, and the future of the iPhone in the enterprise is quite bright." ■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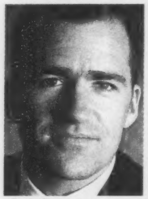
What Hath The iPhone Wrought?

There's no denying Apple's iPhone had a heck of a debut. We asked some pundits to share their thoughts on the device's first whirlwind year.

The public still doesn't understand what's so great about the iPhone. It's lauded as a superior phone (it isn't) that does everything (it doesn't). In fact, the iPhone's greatness comes from its advanced user interface, which has features desktops won't have for 10 years.



MIKE ELGAN, COLUMNIST, *COMPUTERWORLD.COM*

Because of the visual voice-mail revolution the iPhone sparked, I'm seeing other providers dropping all kinds of cash on making this a feature. I've been using a third-party visual voice-mail service on my Sidekick called PhoneTag and haven't actually listened to a message in over two months. There are officially 63 voice mails in my mailbox. Is this a good thing or a bad thing?

CAT SCHWARTZ, GADGET DIRECTOR, eBAY INC.

If the CEO buys an iPhone, it's a business device, no matter what the IT folks say.

MICHAEL GARTENBERG, ANALYST, JUPITERRESEARCH LLC, AND A *COMPUTERWORLD* COLUMNIST

The BlackBerry crowd didn't abandon their devices. If Apple wants to address this clientele, it will have to improve the iPhone's e-mail capability, [and] provide better data plans – particularly for the global traveler – and other features geared toward the corporate client.

FAREENA SULTAN, ASSOCIATE PROFESSOR OF MARKETING, NORTHEASTERN UNIVERSITY

Many grizzled industry veterans are suffering from 'iPhone fatigue.' But until competing handsets surpass the iPhone benchmark, they will continue to be measured against it. Despite the efforts of most other handset vendors, the next handset that is better than today's iPhone will be another product from Apple.

DEREK KERTON, PRINCIPAL ANALYST, THE KERTON GROUP

The iPhone has had less impact on the industry than was anticipated, largely because it has been frustrated by its own rich capabilities boxed into a subpar device. Kind of a Porsche stuck in a parking lot. The next wave of 3G phones will solve some of that, and rising unit sales will help the rest of the industry take notice. Year One grade? B-.

TOM HAYES, TELECOMMUNICATIONS EXECUTIVE AND AUTHOR OF *JUMP POINT: HOW NETWORK CULTURE IS REVOLUTIONIZING BUSINESS*

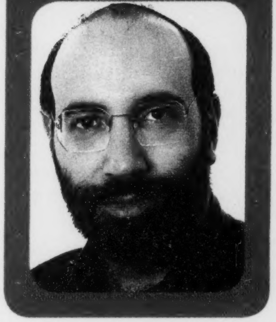
The iPhone rewrote 25 years of assumptions about mobile handsets and business models. The interface is unique, the marketing is unique, and the relationship with the carrier is unique. And for the consumer, it is the first effective mobile media device. Wireless history will be defined as 'pre-' and 'post-' iPhone.

TOM WHEELER, MANAGING DIRECTOR, CORE CAPITAL PARTNERS

PREDICTION

Expect the iPhone to evolve into a family of products, much like the iPod did, except that it will happen at a much faster rate.

MICHAEL GARTENBERG, ANALYST, JUPITERRESEARCH LLC, AND A *COMPUTERWORLD* COLUMNIST



The phone is just a feature of the iPhone. Ninety percent of it is a Wi-Fi-enabled shirt-pocket computer. IT managers may dismiss it as a blingy little toy, but it breaks the idea that a personal computer has to weigh more than 8 ounces to be taken seriously.

AMRIT WILLIAMS, CHIEF TECHNOLOGY OFFICER, BIGFIX INC., AND A FORMER GARTNER INC. ANALYST

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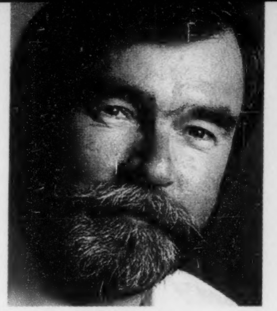

Giving iPhone Its Moment in History

THERE ARE MOMENTS IN HISTORY that place one-to-many communications media in pivotal roles. These events ("Where were you when you heard . . .?") become elemental markers in history not just because of the enormity of what happened, but also because of how they were conveyed to the world.

You can't write the history of radio, for example, without mentioning Herb Morrison's eyewitness report of the Hindenburg disaster in Lakehurst, N.J., back in May 1937. It was a gripping national broadcast of the fiery crash of a German zeppelin that took 36 lives. And don't forget Orson Welles' *War of the Worlds* program in October a year later. Its depiction of Martians marching on U.S. cities panicked listeners, who thought the invasion was real and flooded police stations with calls for instructions or to report the odor of poisonous gas.

Television made its indelible mark in November 1963 when President John F. Kennedy was assassinated. Viewers watched spellbound, and heartbroken, while events unfolded — from Walter Cronkite's tearful removal of his glasses while relating the news of JFK's death to John Kennedy Jr.'s poignant salute as his father's casket rolled past. And, it can be argued, TV helped heal that wound less than three months later, when *The Ed Sullivan Show* presented The Beatles' first U.S. television appearance to 73 million viewers, many of them swooning or screaming in their living rooms as the quartet played "I Want to Hold Your Hand."

What will be the event that gives the iPhone its shining moment as a critical communications medium? If we consider the iPhone and devices like it as a new medium for communications, that moment will be an entirely new experience, one that embraces the video, voice and text capabilities of the iPhone. It won't have anything to do with watching YouTube reruns or sending mobile e-mail while on a bus.

■ What will be the event that gives the iPhone its shining moment as a critical communications medium?

Most important, given an iPhone's mobility, these future seminal events will affect people on the go. That is, crucial iPhone moments will be recognized because people will need to be out of their chairs and beyond their keyboards or TV remotes to become part of history. And just like the earlier examples from radio and TV, I believe there will be two types of history being made: a significant catastrophic event and a trivial, but arresting, piece of entertainment. Once those events happen, the iPhone will become more than just a useful tool or a fun device — it will become part of who we are forever.

As with radio and TV, it may take a few years before the iPhone and its brethren have the critical mass to create a similarly widespread effect when pivotal events occur. You didn't have to be in Lakehurst to watch the hydrogen blimp disintegrate or in Dallas to see bullets rain down on the president's motorcade to feel the power of those moments. You simply needed a radio or a TV. For the iPhone moment, you'll need the device, but you needn't be present where history is happening.

And who knows what form that moment will take? An urban population dodging debris from a falling satellite? A frenzied group encountering a real Bigfoot? Your guess is as good as mine. But each event will require the shared use of the iPhone's mix of mobile communications features. One event will be terrifying, and one will be fun. And core to our social memory — and the lasting history of the events — will be the iPhone itself. ■

Mark Hall *is* Computerworld*'s editor at large. Contact him at mark_hall@computerworld.com.*

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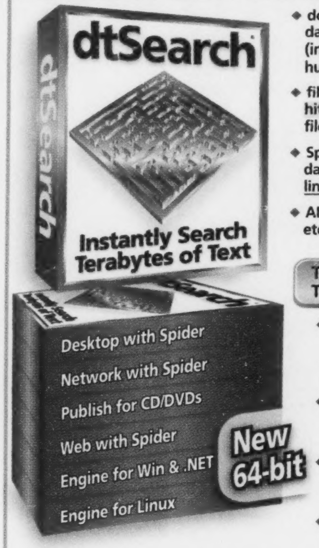

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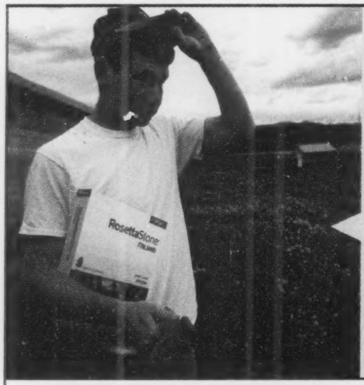

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Career Watch

THE BORED ONES *CAN'T* BE IN IT

More employees report being overworked than having time on their hands.

I HAVE TOO MUCH TO DO	22%
I HAVE TOO LITTLE TO DO	14%

SOURCE: MULTI-INDUSTRY, MULTINATIONAL SIROTA SURVEY INTELLIGENCE DATA, JANUARY 2008. SIROTA CONSULTING LLC, PURCHASE, N.Y.

Major Dilemma

An academic study has addressed the question of why students aren't majoring in computer science, though the findings are far from definitive. Published in the spring 2008 edition of the *Journal of Information Systems Management*, the study was based on a survey of 303 students, 56% of them male, enrolled in an introductory business class at a large Midwestern university. The respondents said they knew more about careers in management, marketing, accounting and finance than they knew about careers in IT. They said they were looking for majors that would be interesting, provide them with initial and long-term job security, and pay them well. The students cited college and departmental Web sites, brochures about the major, and information on the Internet as the most important information resources for selecting a major. None of those sources, however, was rated as more than average in importance. When asked why they were not majoring in computer science, the top two reasons given were that it "wasn't what they wanted to do" and the "subject matter was not of interest."

What Are YOU Lookin' At?

People who pierce visible body parts – lips, tongues, eyebrows – are likely to face bias in the workplace. In surveys of 150 people, three Texas State University professors found that most respondents said they would prefer not to work with those who have visible piercings. The prejudice was even found among people who have such piercings themselves, leading the researchers to conclude that even those who are adorned with body art find the practice "a little unsavory in co-workers."

PAGE COMPILED BY JAMIE ECKLE.

Q&A

Richard J. Brennen

The leader of **Spencer Stuart's information officer practice** talks about trends in senior-level IT executive recruitment.

Are you seeing an increase in turnover among senior IT executives? What factors are driving this? We have. We've seen a rash of retirements in different companies, and it's literally a generational change.

Over the past couple of years, the thing that's driven our [recruitment] business on the senior end is changes in top leadership, where an incoming CEO or CFO wants to bring in their own team, and that has continued to drive change.

Is there some level of wanderlust in the market, where CIOs who have been with a particular organization for several years are looking for new challenges? I think that's the nature of the job. If you look at a new CIO, it typically takes them a year or so to get to know the organization, to develop a strategy and then get executive buy-in on the strategy. Then it takes three or four years to execute on that strategy.

Now you're five or six years into the job. So if your company isn't doing exciting things, like getting into new product lines or expanding into new geographies, then you might be looking for new challenges. But if the company remains an exciting place to work, the executives tend to stay.

–THOMAS HOFFMAN

BAD BEHAVIOR

Last year, 38% of women surveyed said they had heard a colleague at work make a sexually inappropriate comment, up from 22% in 2006.

Did you hear one or more colleagues at work do any of the following during 2007?

	OVERALL	MEN	WOMEN
Make a sexually inappropriate comment	42%	45%	38%
Use a racial slur	35%	44%	24%
Use an ethnic slur	33%	40%	25%
Ridicule someone based on their age	27%	31%	22%
Ridicule someone based on their sexual orientation	23%	26%	19%
Ridicule someone because they are disabled	10%	11%	9%

SOURCE: TELEPHONE SURVEY OF 546 EMPLOYED AMERICANS BY NOVATIONS GROUP INC., BOSTON

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SharkTank

TRUE TALES OF IT LIFE AS TOLD TO SHARKY

Oops!

Retired pilot fish gets a call from his old employer. "New IT management suddenly decided that the Unix staff wasn't doing its job and out of the blue suspended the entire staff without pay for 20 days," reports fish. "About four days into this suspension, one of the Unix servers was having problems and was scheduled to be rebooted. The operators couldn't sign onto the server, so it was decided to reboot it using the hardware management console – except no one in operations knew the password. Then one of the blade servers needed to be rebooted. Again, operations did not have the password to sign onto the blade center. IT management's solution: Tell the suspended staff to come in and supply the passwords. When staff refused because they were suspended, IT management threatened to charge them with insubordination. The operations manager called me to see if I could help them out. I told her if they could fire the entire staff, then they don't need me."

Where's the Fire?

This pilot fish at a retailer manages a consulting call center that takes all of the help desk calls and escalates them on-site as needed. "One day, I noticed a new issue entered into the ticketing system by a help desk employee," fish says. "The description was 'HR employee called because her computer is on fire,' with no other details. The employee was across the hall from the IT office, so I went running over there to find out what happened. Turns out her new LCD monitor was smoking, and she'd called the help desk to ask them what to do. I don't know what was worse – that HR didn't come right to me to get help, or that the help desk didn't raise an alarm immediately!"

Justice

Pilot fish is hired to be the solo IT support person for this department. "The evil, vile department manager thought he was a technical genius," fish says. "When his old laptop died, he demanded a new one but refused the corporate basic software load and configuration. He demanded extra software and configured it himself. He demanded that I load unlicensed software, which I declined. I was rewarded with a written reprimand. Luckily, I was soon transferred to another department. Shortly after I left, he was forced to call the help desk because his laptop had imploded from all the self-configured software. He didn't bother to tell the technician that his system was self-configured, so it was troubleshot as if it had the basic corporate configuration. Result: The genius's laptop was totally destroyed. Nothing was saved. Nothing."

■ *Save Sharky from a season of summer reruns. Send me your true tale of IT life at sharky@computerworld.com. You'll get a snazzy Shark shirt if I use it.*

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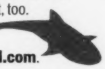

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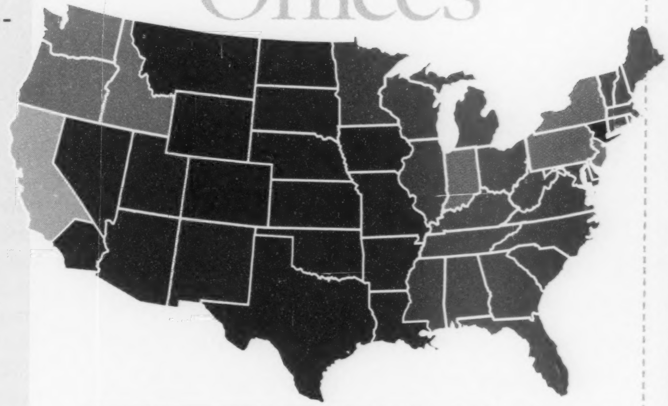

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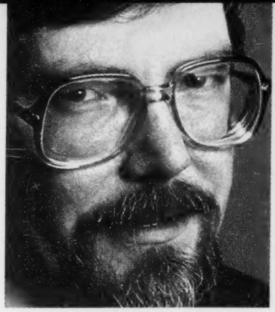
■ FRANKLY SPEAKING

Frank Hayes

RFID Redux



LET'S TALK about RFID. But first, let's imagine the Internet as it might be. Suppose every ISP required its users to buy only its own brand of modem. And use only its own proprietary Web browser. And connect only to Web sites certified by the ISP to work with that modem and Web browser.

How big do you suppose the Internet would be today?

That's pretty much the situation we're in now with RFID.

A few weeks ago, I wrote about how Wal-Mart is trying to restart its stalled RFID effort. In 2003, Wal-Mart mandated that its suppliers attach RFID tags to pallets of goods they deliver to the retail giant, starting in 2005. Some have, but many have refused.

Wal-Mart's solution: Charge suppliers a fee for attaching an RFID tag. No RFID tags on your shipment? You get dinged $2 per pallet. That seemed like a smart move to me, because it sets out a clear, easy-to-calculate cost for suppliers still deciding whether RFID is worth the price.

I still think it's a smart move. But after hearing from readers, I don't think it will move any suppliers to RFID.

Why not? Because tags are a trivial part of RFID's price. As one reader put it, "A pallet already costs $15. Another $2 is no big deal."

In fact, for small suppliers, $2 is a great deal, because the RFID world today looks a lot like that imaginary, highly proprietary Internet. RFID tags may be standardized, but that's not true of the software that supports using them for warehousing and inventory management. That software may nominally meet formal standards, but it won't interoperate with any competitor's software.

So when a big customer like Wal-Mart goes with Vendor X's system, all of Wal-Mart's suppliers have to buy software from Vendor X too. They can't buy from another vendor or roll their own, because it must be certified by Vendor X before it can talk to Wal-Mart's software. The suppliers are a captive market.

■ Tags are a trivial part of RFID's price. As one reader put it, 'A pallet already costs $15. Another $2 is no big deal.'

And when Target goes with Vendor Y, and Sears goes with Vendor Z, the number of RFID systems required for captive suppliers just keeps going up — at monopoly prices.

No wonder $2 a pallet sounds like a bargain.

What makes suppliers so sure that's how it will go? Because they went through this two decades ago, when big customers mandated the use of electronic data interchange documents. As with RFID, there were EDI standards, but there was no actual EDI interoperability. And suppliers were captive — and got soaked.

They don't want that to happen all over again.

What they want is something like the Internet, where modems and networks and Web servers and browsers all interoperate, no matter where they come from.

Wal-Mart can make that happen. The world's biggest retailer could start designing its next-generation RFID systems today, using a set of interfaces that can be used by any RFID software — commercial, home-brew or open source. Wal-Mart can force interoperability.

That's in Wal-Mart's interest as it tries to get more from its investment in RFID. It's in the interest of small suppliers that need the competitive pricing that interoperable RFID systems will allow.

And it's also in the interest of the RFID vendors who are still fighting to remain proprietary. See, proprietary RFID can never grow beyond the resistance of captive suppliers. But interoperable RFID could become huge — with software-vendor profits to match.

When they finally understand that, they could make RFID as big as the Internet. ■

Frank Hayes *is Computerworld's senior news columnist. Contact him at frank_hayes@computerworld.com.*

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